



FLIGHT

First Aero Weekly in the World.



Founder and Editor : STANLEY SPOONER.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

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TO OUR READERS.

The Supply of "FLIGHT." Important Notice.

Order "FLIGHT" to be either delivered or reserved for you regularly.

As the demand for "FLIGHT" is so great each week, it is of the utmost importance that readers should place their orders *firmly* for copies of "FLIGHT" at the bookstalls, their newsagents, or direct from the publishers, at 44, St. Martin's Lane, W.C., if they wish to secure a copy every week and avoid disappointment. The stringent Government restrictions in regard to the supply of printing paper necessitates this precaution in order that only actual numbers required are printed, and all wastage by unsold copies may thereby be reduced to a minimum, if not eliminated.

THE PUBLISHERS.

EDITORIAL COMMENT.

SOME of the "evidence" at the long-drawn-out R.F.C. Inquiry which drags on week after week reads very like unto ancient history—as history is being made these days—and the repeated challenges as to British supremacy in the air are a striking travesty upon the position of our Air Services as they are to-day. Whatever the shortcomings in Government foresight in the earlier days of hostilities and failure here and there in departmental organisation to make good, there can be "no possible probable doubt, no possible doubt whatever" that the R.F.C. and our French Allies now have and for some little time have had the whole air situation so thoroughly in hand as to handicap most seriously the

tactics of the German Staff in the disposition of their main and reserve units. Temporarily, for quite a short period, it is idle to suggest that the German flying men did not by a bit of luck and clever tactics succeed a few months ago in bothering our air forces in France a good deal. But that is where the ancient history of the Air Committee evidence comes in, and it is good reading in the accounts now coming along from all sides to find the absolute confidence and daring which permeates the entire *personnel* of the R.F.C. in its work over and away back beyond the German lines. Not only does this outstanding fact loom large in official *communiqués* and the various correspondents' descriptions of the work in progress in France, but from private sources the position of affairs is confirmed in no uncertain manner. Only this morning, as we are writing, a letter reaches us from an officer—a personal friend—in the trenches "somewhere" out there which is worth quoting as a live document, and this is how he passes on his impressions:—

"The last four or five days we have had excellent scraps in the air above us, and have shot down three Hun planes, the third this morning at sun-up.

"At this part of the line our airmen reign supreme, and our 'Archies' are handled very well. This morning after the Hun had come down (in the Hun lines unfortunately), one of our fellows sailed leisurely over to the enemy and cruised calmly up and down for a long time over their trenches and quite low.

"I simply rolled with laughter. The Huns had about two 'Archies' firing for all they were worth, all their machine guns—able to—concentrated their fire, and the infantry in the trenches got going with rapid on to him. It was too funny for words; he ignored absolutely what must have been a perfect hail of lead, and in the most exasperating manner possible literally 'walked' up and down with engine half speed. For a piece of consummate impudence it wanted a lot of beating. Well, not satisfied quite, when he returned he stopped over No Man's Land and looped the loop ten times right off, and then went home to 'brekker.' He must be the

same chap who loops the loop in the evening, and 'some boy,' too."

It would be impossible to refer here to a tithe of the references bearing upon the same conclusion, which have appeared from the leading war correspondents, and which have in the main been brought together for future reference in another section of "FLIGHT," but one and all are insistent, almost day by day, as to our having practically "blinded" our arch enemies by our Air Services' superior tactics and fearless method of operating in the air. Merely to quote a couple of passages from the despatches of the *Times* special correspondents, full of pregnant suggestions, is sufficient to "point the moral," the one appearing on Wednesday of last week and the other on Monday last. In a long and very vivid account on the 5th of the third day of the great battle he writes:—

"Another necessary comment on the situation is the continued and amazing demonstration of our supremacy in the air. It is an extraordinary sight to see our aeroplanes, singly and in squadrons, sailing almost as they please over the lines and far out of sight over the enemy's territory with never a German machine appearing. If ever one does have the temerity to come near the front it is immediately hunted home, and goes, as Kipling says, 'like a cat along a fence.' Closely related to this is the fact that to-day I again counted no less than 16 of our kite balloons floating serenely over our lines, while only two German balloons were in sight, far in the rear of the enemy positions."

In the second article, on the 10th, dealing with the joint operations, the *Times* correspondent particularly joins up the French Air Service in his praises thus:—

"In the first stage of the offensive, in the air fighting the French were completely masters. On June 28th French squadrons destroyed all the German sausage balloons over the front, and for two days before the infantry fighting not a single sausage dared to show itself. In the same period only nine enemy aeroplanes were

seen, not one of which attempted to cross the French lines. The last troop movements and the last artillery disposition were thus effected in secrecy."

From the German versions of what is happening in air reconnaissance, it might be imagined that the Allies are hopelessly outclassed. But this need not disturb anybody. Our own known facts and figures so directly give the lie to the false statistics spread abroad, for obvious reasons, from German sources that the Huns' concoctions, by the very intensity of their mendaciousness, carry their own antidote. Under the circumstances most folk will appreciate the rather apposite interpolations at the Inquiry Committee of Mr. Justice Bailhache in regard to present conditions of affairs automatically supplying the answers to many of the unnecessary questions which have helped to prolong the labours of the Air Committee unto weariness. As we suggested several weeks ago, the more quickly the Committee can complete its purpose and release such men as Sir David Henderson for highly valuable and urgent war work, the better everybody, having the country's and the aircraft industry's welfare at heart, will be pleased. We have had no reason since to modify that view from anything that has transpired at the public meetings of the Committee, and we are glad to notice that Lord Montagu of Beaulieu expressed the same view as recently as last week. The whole business is a sorry spectacle from an Imperial point of view, although it is, for many reasons, just as well, perhaps, that the inquiry has been held. That its labours may not endure much longer is once again the fervent hope of ourselves. Its prolongation is not helpful to those chiefly concerned, and the measure of indifference of the general reader to its "horrible disclosures" is well reflected in the gradually diminishing space accorded its proceedings in the columns of the one-time ha'penny champions of its cause. It is not unlikely to prove to be the obsequies of many so-called scandals and misconceptions, and possibly of the hopes and ambitions of not a few.

THE ROLL OF HONOUR.

THE Secretary of the Admiralty announces the following casualties:—

Died of Injuries.

1st Grade Air-Mechanic A. Hampson, R.N.A.S.

The following casualties have been officially announced by the War Office:—

Killed.

Second Lieutenant J. C. Simpson, Royal Flying Corps.

Previously reported Missing, now reported Killed.

2056 1st Class Air-Mechanic H. Kirkbride, Royal Flying Corps.

Died.

21833 2nd Class Air-Mechanic E. Whitfield, Royal Flying Corps.

Wounded.

Second Lieutenant C. L. Cordon, Wilts Regt., attached R.F.C.

Captain S. G. Gilmour, Royal Flying Corps.

Captain J. K. Law, R. Fusiliers and R.F.C.

Lieutenant E. A. Packe, Oxford and Bucks L.I., attached R.F.C.

Lieutenant G. W. Panter, R. Irish Rifles, attached R.F.C.

Second Lieutenant A. A. N. Pentland, Royal Flying Corps.

Major L. W. B. Rees, R.G.A. and R.F.C.

Second Lieutenant E. M. Roberts, Royal Flying Corps.

Lieutenant A. N. Solly, Manchester Regt., attached R.F.C.

23181 2nd Class Air-Mechanic E. H. Carman, Royal Flying Corps.

9337 2nd Class Air-Mechanic E. E. F. King, Royal Flying Corps.

17315 2nd Class Air-Mechanic D. V. Lindsay, Royal Flying Corps.

23485 2nd Class Air-Mechanic G. W. H. Weeden, Royal Flying Corps.

Previously reported Missing, now reported Wounded and Prisoner of War.

Lieutenant A. Cairnduff, Royal Flying Corps.

Missing.

Lieutenant R. Burgess, A.C.C., attached R.F.C.

Captain T. W. P. L. Chaloner, Yorks. Regt. and R.F.C.

Second Lieutenant C. H. Cox, Royal Flying Corps.

Second Lieutenant J. H. Firstbrook, Royal Flying Corps.

Second Lieutenant E. B. Harvey, London Regt., attached R.F.C.

Lieutenant I. C. MacDonell, Canadian Cavalry, attached R.F.C.

Second Lieutenant K. P. MacNamara, Royal Flying Corps.

Second Lieutenant C. Monckton, R. Irish Fus. and R.F.C.

Second Lieutenant J. F. P. B. Quinlan, R.F.A., attached R.F.C.

Second Lieutenant R. C. Stoddard, Royal Flying Corps.

Second Lieutenant J. W. Toone, R. Irish Rif. and R.F.C.

Lieutenant W. O. T. Tudor-Hart, Northd. Fus., attached R.F.C.

Second Lieutenant C. I. Van Nostrand, Royal Flying Corps.

Captain G. W. Webb, R. Irish Rif. and R.F.C.

Second Lieutenant H. A. Williamson, Manchester Regt., attached R.F.C.

Second Lieutenant L. A. Wingfield, R. Fus. and R.F.C.

10387 2nd Class Air-Mechanic T. N. U. Robinson, Royal Flying Corps.

3613 Sergeant H. Taylor, Royal Flying Corps.

1746 Sergeant G. Topliffe, Royal Flying Corps.

The British Air Service

PER ARDUA AD ASTRA

UNDER this heading are published each week the official announcements of appointments and promotions affecting the Royal Naval Air Service and the Royal Flying Corps (Military Wing) and Central Flying School. These notices are not duplicated. By way of instance, when an appointment to the Royal Naval Air Service is announced by the Admiralty it is published forthwith, but subsequently, when it appears in the LONDON GAZETTE, it is not repeated in this column.

Royal Naval Air Service.

THE following appeared among the Admiralty announcements of July 4th:—

G. G. Dawson granted a temporary commission as Lieutenant, seniority April 29th, and appointed to "President," additional, for R.N.A.S.

The following appeared among the Admiralty announcements of July 6th:—

The following have been entered as Probationary Flight Sub-Lieutenants (temporary), seniority July 5th, and all appointed to "President," additional, for R.N.A.S.: C. W. Howitt, H. M. Morris, A. G. B. Ellis, M. W. Buckley, E. R. Barker, L. E. B. Wimbush, J. H. Solomon, E. W. Busby, F. L. Green, J. G. A. A. Case, W. A. Scott, C. J. Huddy, C. V. Halford-Thompson, G. W. Hemming, E. T. Hayne, J. S. Smith, F. C. F. Walwin, F. S. Russell, and H. L. Smith.

The following appeared among the Admiralty announcements of the 10th inst.:—

Warrant Officers F. H. Williams and L. J. Killmayer (both 1st grade) and C. F. Rasmusen (2nd grade), all promoted to temporary rank of Flight-Lieutenant, seniority of July 6th. The following temporary entries (R.N.V.R.) have been made, seniority of July 8th: Lieutenants—P. A. Jackson, D. A. B. Hill, P. M. Hampshire, G. Robbins and J. Matthew; Sub-Lieutenant—J. J. James, all appointed to "President," for R.N.A.S.

Royal Flying Corps (Military Wing).

THE following appeared in the *London Gazette* of July 4th:—

Flight-Commanders (from Flying Officers, and to be Temporary Captains whilst so employed).—Temporary Lieut. R. Raymond-Barker, General List; June 17th, 1916. Second Lieut. (Temporary Lieut.) G. R. M. Reid, Arg. and Suth'd Highrs. (Special Reserve); June 19th, 1916.

Assistant Equipment Officers.—Second Lieut. E. G. A. Lefrere; June 19th, 1916. Temporary Second Lieut. R. G. Hutchinson, General List; June 20th, 1916. Second Lieuts. A. N. Appleford and G. P. Achurch, Special Reserve; June 21st, 1916.

Memoranda.—To be Temporary Second Lieutenants: Sapper

James M. Macaulay, from R.E. (T.F.), for duty with the R.F.C.; June 14th, 1916.

Supplementary to Regular Corps.—Second Lieutenants (on probation) confirmed in their rank: K. A. C. Creswell, E. G. A. Lefrere, D. MacK. P. Riach, A. J. M. Ross, J. H. Inskip, F. L. W., Viscount Combermere, W. M. Bevan, G. Gilling, H. F. Wright, F. M. Carter, W. H. Hubbard, R. E. A. Macbeth, F. C. Biette, A. E. Glew, W. Roche-Kelly.

To be Second Lieutenants (on probation): Percy M. T. Hill; May 30th, 1916. Kenneth W. P. Hindley; June 5th, 1916. Arthur O. Bet's; June 14th, 1916. Arthur L. Butcher, June 16th, 1916. John W. G. Mackinlay; June 19th, 1916.

The following appeared in a supplement to the *London Gazette* issued on July 5th:—

Temporary appointment at War Office.

Staff-Lieutenant.—Second Lieut. C. H. Whittington, R.F.C., Special Reserve, from an Assistant Equipment Officer, *vice* Qmr. and Hon. Lieut. (Temporary Capt.) W. J. D. Pryce, R.F.C.; May 27th, 1916.

Establishments.

Depôt-Commanders (from Squadron-Commanders, and to be Temporary Lieut Colonels whilst so employed).—May 31st, 1916: Temporary Major S. E. Smith, Glouc. R. (T.F.); Capt. (Temporary Major) A. Huggins, Special Reserve; Capt. (Temporary Major) R. H. Collier, Special Reserve; Capt. (Temporary Major) R. C. Donaldson-Hudson, Shrops. Yeo. (T.F.) Reserve.

Park Commanders (from Squadron-Commanders and to retain their Temporary rank whilst so employed).—May 10th, 1916: Capt. (Temporary Major) D. G. Conner, R.F.A.; Capt. (Temporary Major) G. B. Hynes, R.G.A.; Capt. (Temporary Major) G. C. R. Mumby, Special Reserve; Qmr. and Hon. Lieut. (Temporary Major) A. Fletcher, R.F.C.; Qmr. and Hon. Lieut. (Temporary Major) F. H. Kirby, V.C., R.F.C. Temporary Major A. E. G. MacCullum, General List; June 7th, 1916. From Equipment Officers and to be Temporary Majors whilst so employed: Capt. A. ap Ellis, W. Rid. Divl. Sig. Co., R.E. (T.F.); June 1st, 1916.



The Warneford Memorial.—The unveiling ceremony, by Lord Derby, at West Brompton Cemetery on Tuesday afternoon. The scene immediately after the unveiling. Those present included Lt.-Col. Corkery, Mrs. Corkery (the V.C.'s mother), and sisters, Commodore Murray Sueter, R.N., &c. Detail photographs of the model of the Memorial appeared in "FLIGHT" of December 10th, 1915.

Lieut. (Temporary Capt.) C. Defries, Special Reserve; June 16th, 1916.

Flight-Commander.—Temporary Second Lieut. R. L. Farley, General List, from a Balloon Officer, and to be Temporary Captain whilst so employed; June 2nd, 1916.

Equipment Officers.—Qr.-Mr. and Hon. Lieut. W. J. D. Pryce, R.F.C., from a Staff-Lieutenant, and to be Temporary Captain whilst so employed; May 27th, 1916. *From Assistant Equipment Officers, and to be Temporary Captains whilst so employed.*—Lieut. C. Hirtzell, Special Reserve; May 27th, 1916. Second Lieut. F. C. V. Laws, Linc. R.; June 1st, 1916. Lieut. A. M. Cott, Special Reserve; June 19th, 1916. Second Lieut. B. May, Special Reserve; June 20th, 1916.

Flying Officers.—Second Lieut. K. L. Gopsill, E. Surr. R. (Special Reserve); May 29th, 1916. June 4th, 1916: Capt. G. W. Williamson, Manch. R. (Special Reserve), and to be seconded; Lieut. R. H. Shears, Shrops. L.I., and to be seconded; Temporary Second Lieut. L. C. Burcher, Worc. R., and to be transferred to the General List; June 10th, 1916: Temporary Second Lieut. S. K. Muir, K.R. Rif. C., and to be transferred to the General List; Second Lieut. W. H. Hubbard, Special Reserve; Second Lieut. R. E. A. Macbeth, Special Reserve; Second Lieut. E. D. Steytler, S. Lan. R., and to be seconded. June 14th, 1916: Second Lieut. (Temporary Lieut.) S. P. Smith, A.S.C. (T.F.); Second Lieut. F. C. Biette, Special Reserve. June 15th, 1916: Second Lieut. J. G. Cameron, Camn. Highrs., and to be seconded; Second Lieut. W. Roche-Kelly, Special Reserve. Temporary Second Lieut. W. M. Fry, Som. L.I., and to be transferred to the General List; June 16th, 1916. June 17th, 1916: Capt. C. H. B. Blount, R. W. Surr. R., and to be seconded; Second Lieut. (Temporary Lieut.) R. C. B. Riley, War. Yeo. (T.F.); Second Lieut. R. H. M. S. Saundby, R. War. R. (T.F.); Temporary Second Lieut. S. Alder, Notts. and Derby R., and to be transferred to the General List; Temporary Second Lieut. W. J. Tempest, Garr. Bn., Yorks. L.I., and to be transferred to the General List; Second Lieut. (on probation) W. T. Coles, Oxf. and Bucks. L.I., Special Reserve, and to be seconded; Second Lieut. F. M. Carter, Special Reserve; Second Lieut. A. E. Glew, Special Reserve. Second Lieut. J. T. Morgan, R. W. Fus., and to be seconded; June 18th, 1916. June 19th, 1916: Second Lieut. (on probation) R. Gregory, 4th Conn. Rang., Special Reserve, and to be seconded; Second Lieut. D. H. S. Davies, R. War. R., and to be seconded.

Flying Officers (Observers).—June 19th, 1916: Lieut. E. W. Bowyer-Bower, E. Surr. R., Special Reserve, and to be seconded; Second Lieut. G. A. Exley, Yorks. L.I. (T.F.). June 20th, 1916: Temporary Second Lieut. (Temporary Lieut.) H. E. Wood, Border R. (T.F.); Temporary Second Lieut. D. M. Deighton, A.S.C., and to be transferred to the General List; June 21st, 1916. Temporary Lieut. F. D. Stevens, Motor Mach. Gun Serv., and to be transferred to the General List; Temporary Lieut. G. G. Moore, R. Highrs., and to be transferred to the General List; Second Lieut. R. R. Gaskell, R.E. (T.F.); Temporary Second Lieut. H. E. Scoones, General List; Second Lieut. C. V. J. Borton, Norf. R., and to be seconded; Temporary Second Lieut. F. Beaumont, General List; Second Lieut. T. S. Roadley, S. Staff. R. (Special Reserve), and to be seconded; Second Lieut. (on probation) H. R. Jaques, S. Staff. R. (Special Reserve), and to be seconded; Second Lieut. C. Turner, Worc. R., and to be seconded; Second Lieut. E. A. Packe, Oxf. and Bucks. L.I., and to be seconded; Second Lieut. H. A. D. Mackay, Hamps. R., and to be seconded. Lieut. C. S. Peach, W. Yorks. R., and to be seconded; June 24th, 1916.

Memorandum.—The undermentioned to be Temporary Second Lieut.: Corpl. Michael Oswe Illingworth, from R.F.C., for duty with the Mil. Wing of that Corps; June 12th, 1916.

Special Reserve of Officers.—The undermentioned Second Lieuts. (on probation) are confirmed in their rank: W. W. Lang, W. E. Soper, A. B. Fanstone, M. W. Wilson, H. J. de C. Moore, F. J. Game, T. G. Mellanby.

The following appeared in a supplement to the *London Gazette* issued on July 6th:—

Temporary appointment made at the War Office.

Staff Lieutenant.—Second Lieut. H. J. de C. Moore, R.F.C., Special Reserve; June 22nd, 1916.

Establishments.

Balloon Officers.—May 26th, 1916: Temporary Capt. J. O. Davis, General List, with seniority from April 17th, 1915. Temporary Capt. Hon. A. S. Byng, General List, with seniority from April 19th, 1915. Temporary Lieut. A. C. B. Geddes, General List, with seniority from June 30th, 1915. Temporary Lieut. E. B. Cowell, General List, with seniority from July 23rd, 1915.

Assistant Equipment Officer.—Second Lieut. D. MacK. P. Riach, Special Reserve; June 19th, 1916.

Memoranda.—Flight-Lieutenants, from R.N.A.S., to be Temporary Captains for duty with the R.F.C.; May 26th, 1916:

John O. Davis, with seniority from April 17th, 1915; Hon. Antony S. Byng, with seniority from April 19th, 1915.

Flight Sub-Lieutenants, from R.N.A.S., to be Temporary Lieutenants for duty with the R.F.C.; May 26th, 1916: Alastair C. B. Geddes, with seniority from June 30th, 1915; Ebenezer B. Cowell, with seniority from July 23rd, 1915.

The following appeared in the *London Gazette* of July 7th:—

Flying Officers.—Temporary Second Lieut. W. B. Power, General List; May 30th, 1916. Temporary Second Lieut. E. L. Pearson, General List; May 31st, 1916. June 17th, 1916: Lieut. I. C. Barclay, Sea. Highrs., and to be seconded; Temporary Second Lieut. F. Sowrey, R. Fus., and to be transferred to the General List; Temporary Second Lieut. A. F. A. Patterson, W. York R., and to be transferred to the General List. June 19th, 1916: Second Lieut. (Temporary Capt.) A. T. Loyd, E. Kent R. (T.F.); Temporary Lieut. G. G. B. Downing, Welsh R., and to be transferred to the General List; Temporary Second Lieut. (Temporary Lieut.) G. W. M. Green, Army Cyclists Corps, from a Flying Officer (Observer) and to be transferred to the General List; Second Lieut. W. W. Lang, Special Reserve; Temporary Second Lieut. A. W. Reynell, E. Surr. R., and to be transferred to the General List; Second Lieut. W. E. Soper, Special Reserve; Second Lieut. A. B. Fanstone, Special Reserve; Second Lieut. N. W. Wadham, Rif. Brig., and to be seconded. June 20th, 1916: Temporary Second Lieut. R. M. Hill, North'd Fus., and to be transferred to the General List; Second Lieut. A. H. Bottrell, R. War. R., from a Flying Officer (Observer); Second Lieut. C. E. H. C. Macpherson, R. Dub. Fus., and to be seconded; Second Lieut. M. W. Wilson, Special Reserve. June 21st, 1916: Bt. Major A. J. Ross, R.E., from a Flying Officer (Observer); Second Lieut. C. A. Hore, N. Staff. R., and to be seconded.

Flying Officers (Observers).—June 1st, 1916: Second Lieut. R. L. Clegg, Lan. Fus. (Special Reserve), and to be seconded; Temporary Second Lieut. J. Brown, R.F.A.; Temporary Second Lieut. K. G. Cruickshank, Lan. Fus., and to be transferred to the General List; Temporary Second Lieut. D. Langlands, R. Suss. R., and to be transferred to the General List; June 8th, 1916. June 12th, 1916: Lieut. E. H. Bird, R. Fus. (since killed in action), and to be seconded; Second Lieut. (Temporary Lieut.) J. A. Mann, Sco. Rif. (T.F.); Second Lieut. J. C. M. Stewart, W. Yorks. R. (T.F.); Temporary Second Lieut. R. V. Walker, Conn. Rang., and to be transferred to the General List; Temporary Second Lieut. J. A. Hinchcliffe, York. L.I., and to be transferred to the General List; Second Lieutenant J. C. Barraclough, York. R., and to be seconded; Second Lieut. W. E. Young, Dorset R. (Special Reserve), and to be seconded; June 13th, 1916.

Assistant Equipment Officers.—Second Lieutenant H. J. de C. Moore, Special Reserve; June 1st, 1916. Second Lieut. F. J. Game, Special Reserve; June 23rd, 1916. Second Lieut. T. G. Mellanby, Special Reserve; June 24th, 1916.

Attached to Headquarter Units.

Brigade-Major.—Temporary Capt. F. A. Forde, from a Wing-Adjutant, R.F.C., vice Major R. James, N. Staff, R.

The following appeared in a supplement to the *London Gazette* issued on July 8th:—

Memorandum.—Allen P. Adams, from Second Lieutenant (on probation), R.F.C. (Special Reserve), to be Temporary Second Lieutenant on the General List; July 9th, 1916.

The following appeared in a supplement to the *London Gazette* issued on the 10th inst.:—

Wing-Commanders (from Squadron-Commanders, and to be Temporary Lieutenant-Colonels whilst so employed).—Major B. R. W. Beor, R.A.; June 18th, 1916. Major T. C. R. Higgins, R. Lanc. R.; June 25th, 1916.

Flying Officers (Observers).—June 25th, 1916: Temporary Second Lieut. C. K. M. Douglas, R. Scots, and to be transferred to the General List; Second Lieut. C. E. M. Pickthorne, A.S.C. (Special Reserve); Second Lieut. W. McCay, Sea. Highrs., and to be seconded.

Memoranda.—2nd Class Air-Mechanics, from R.F.C., to be Temporary Second Lieutenants for duty with the Military Wing of that Corps: Maurice W. Dickens; June 12th, 1916. Gilbert Howe; June 19th, 1916.

Royal Flying Corps (Territorial Force).

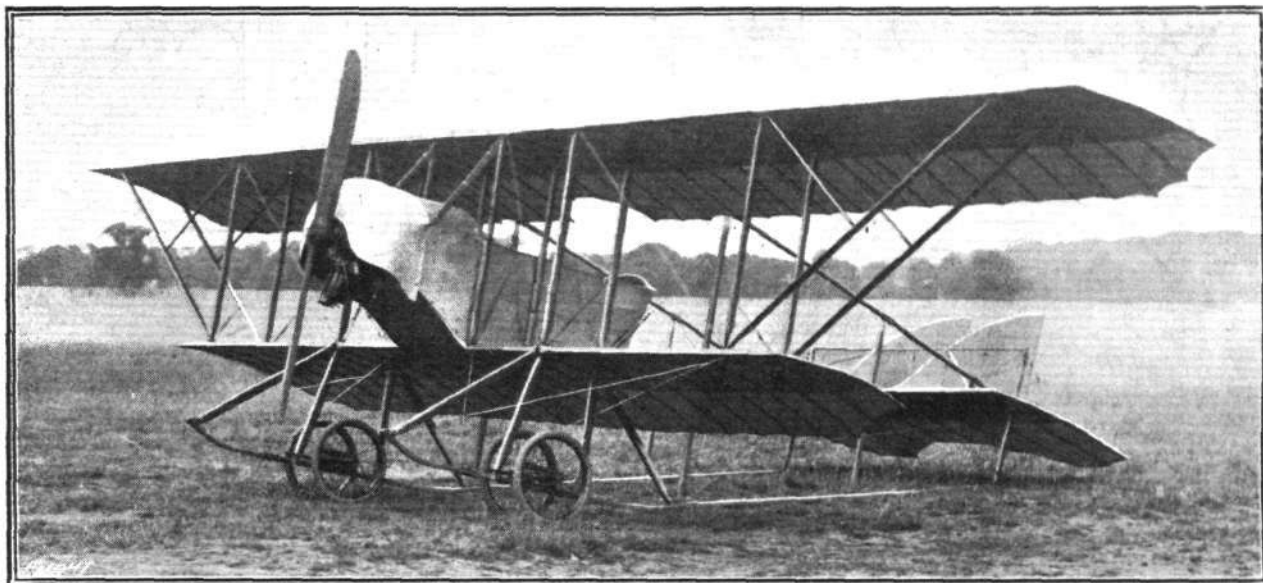
The following appeared in a supplement to the *London Gazette* issued on July 6th:—

Hampshire Aircraft Parks.—Captains to be Temporary Majors: Adjutant A. R. Martin, and to remain Adjutant; May 1st, 1916. C. H. Douglas; June 1st, 1916. G. B. Turner; June 1st, 1916. C. K. Butler Stoney; June 1st, 1916. Lieutenants to be Temporary Captains; June 1st, 1916: R. Whiddington, R. M. S. Maxwell, and S. W. Hiscocks. Second Lieut. W. S. Farren is confirmed in his rank. Second Lieut. W. S. Farren to be Temporary Captain; June 1st, 1916. Second Lieuts. to be Temporary Lieuts.; June 1st, 1916: F. A. Short, A. R. Langton, A. J. Elliott, S. J. Waters and J. H. Glover.

CONSTRUCTIONAL PROGRESS AT THE RUFFY-BAUMANN SCHOOL OF FLYING.

APART from the hard usage of a machine engaged on actual war service, it is doubtful whether there exists any form of work which tests a machine more severely than that to which it is subjected at a flying school. For this reason it is a matter of some interest to follow the evolution of the various details of a school machine even

found somewhat liable to give way under the severe treatment frequently meted out to a machine at the hands of a beginner in the gentle art of flying, while others have been made with the object of improvement from the point of view of quickness and cheapness of manufacture rather than from one of constructional strength.

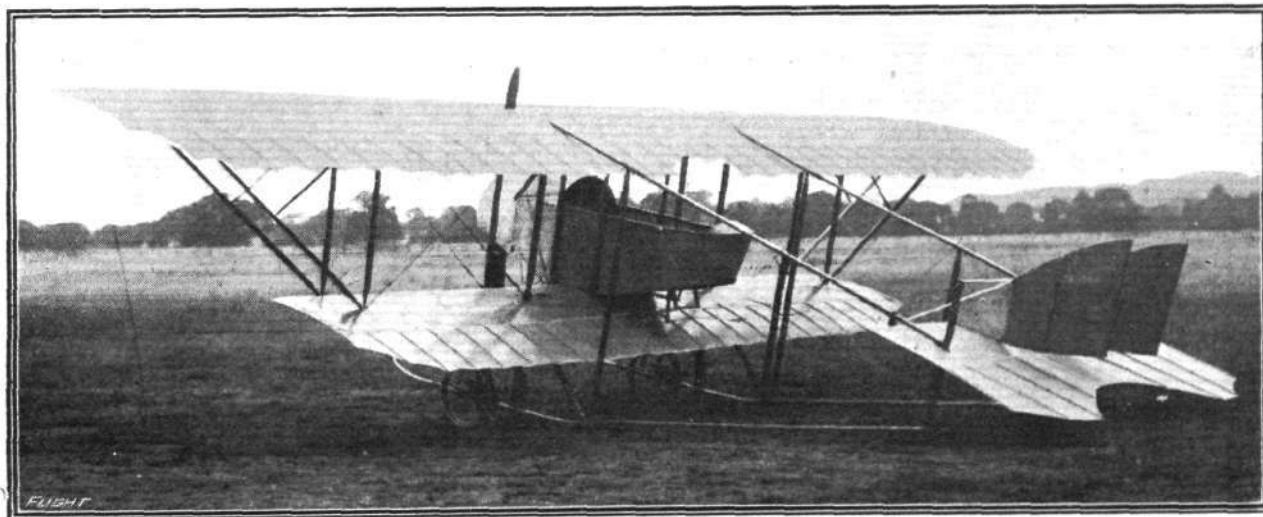


Three-quarter front view of the 60 h.p. Ruffy-Baumann school biplane.

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if its general design follows closely along standard lines. A case in point is the school type of machine built and flown at the Ruffy-Baumann school of flying at Hendon. Although these machines are admittedly of the Caudron type—a type, by the way, which has proved itself through a number of years exceptionally suitable for instruction

In the accompanying photographs and sketches some of the constructional details of the Ruffy-Baumann biplanes are illustrated, giving a better idea than is possible by means of a written description of the various fittings and parts employed. As the new 60 h.p. two-seater is the latest type, this has been chosen for purposes



Three-quarter rear view of the 60 h.p. Ruffy-Baumann school biplane.

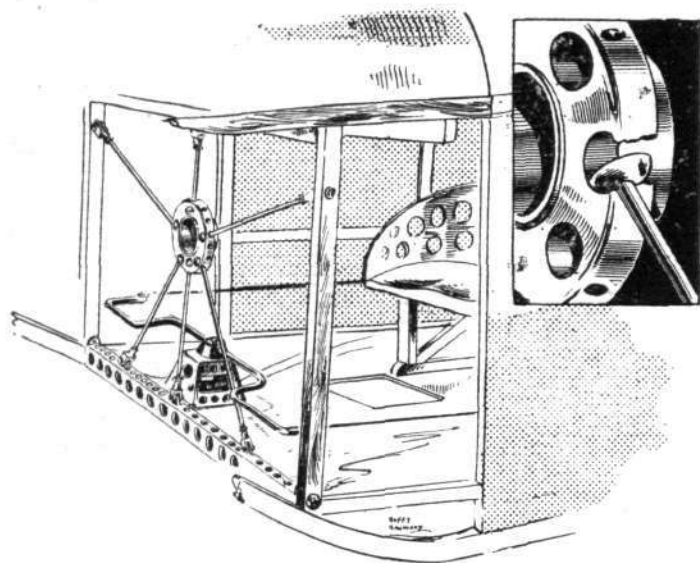
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purposes—following closely along the lines of the original machine, a close inspection soon reveals a number of detail alterations, suggested by years of experience in school work. Some of these alterations are in the nature of strengthening up parts which, although standing up well to stresses imposed in ordinary flying, have been

of illustration. On inspecting the machine, one of the first things one notices is the fact that the nacelle, instead of being mounted on stepped struts some little distance above the lower wing, rests with its lower longerons on the spars of this, being attached to the inner plane struts by bolts in the manner shown in one of the accompany-

ing sketches. This gives a somewhat deeper body of rather better shape than the old one, and the cowl round the Gnome engine forms a fairly good entry for the air.

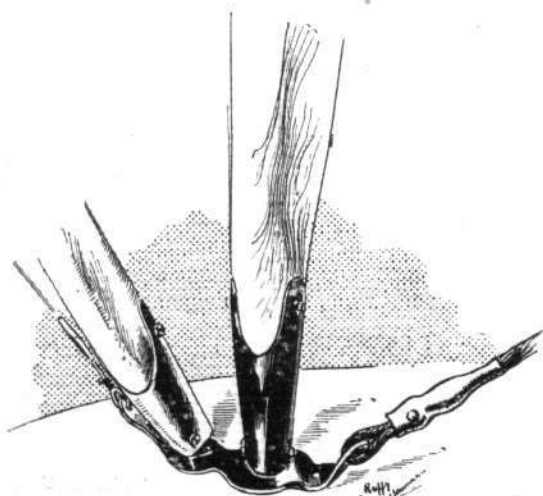
As dual control is fitted on all the machines built by



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The rear engine support of the Ruffy-Baumann biplanes. Inset is shown the ball joint of the bracing rods to the collar on the engine shaft.

the Ruffy-Baumann school, the rear engine bracing has been somewhat modified in order to provide room for the front foot bar, which, as one of our sketches shows, is in the form of a steel bar, bent to form a step into which fits the pilot's foot. Since the two bracing rods running from the rear engine bearer would have formed an obstruction to the free movement of the foot bar, they are no longer taken to the lower corners of the nacelle, but to a point some little distance inside the corners as shown, and since this throws a bending strain on the horizontal strut, that member has been reinforced with a length of channel steel, drilled for lightness. A further alteration differing from standard practice in regard to the rear engine support will be noticed in the illustration.

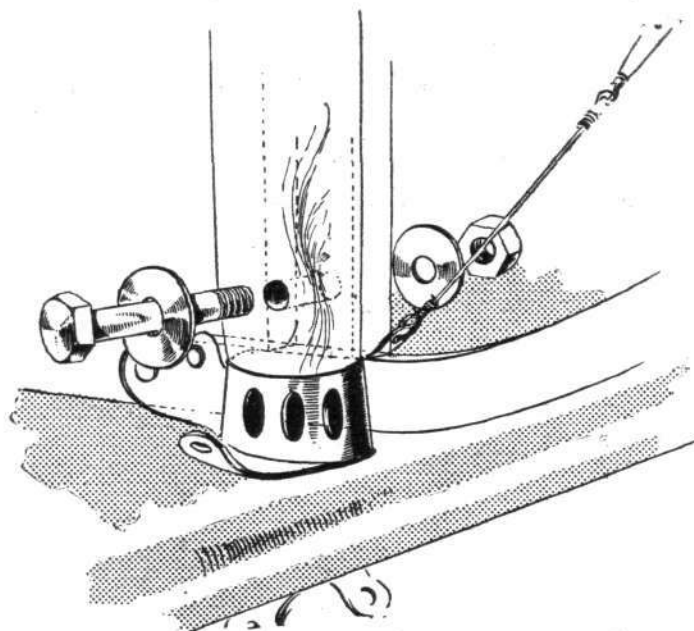


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Interplane strut sockets on the Ruffy-Baumann biplanes.

Instead of the usual flanged collar on the induction pipe, to which the bracing rods are attached by means of forked ends, there is a wide collar turned out of a solid steel bar. In this collar are drilled a number of holes a

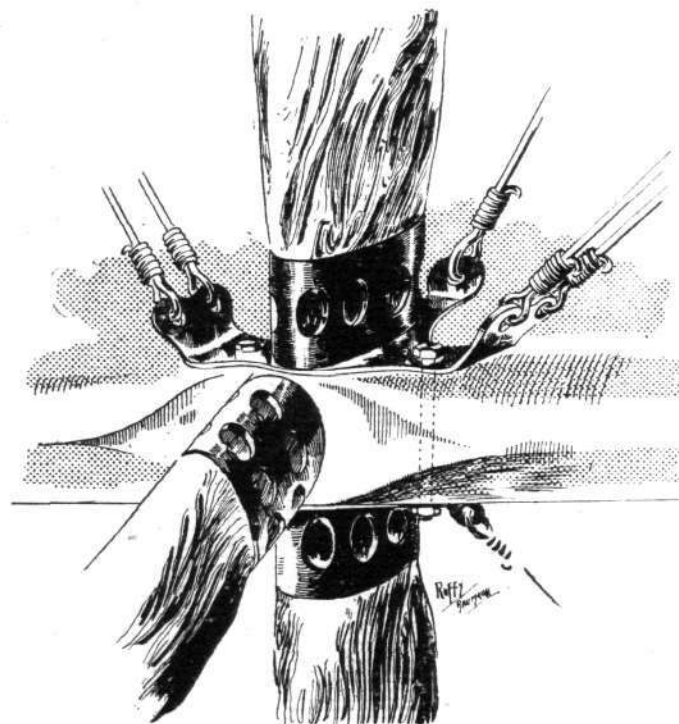
short distance inside the outer edge of the collar, in which are accommodated hemispherical nuts, internally threaded to receive the inner ends of the bracing rods.



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Sketch showing how the lower longerons are secured to the inner interplane struts on the Ruffy-Baumann biplanes.

The arrangement will be clear from the inset in the larger sketch. It will be seen that in this manner a universal joint is formed, so that a slight discrepancy in the alignment of the attachment of the outer ends of the bracing rods and the flanged collar on the engine shaft will not be of any consequence.



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Attachment of the chassis struts to the leading edge on the Ruffy-Baumann biplanes.

With regard to some of the fittings illustrated little need be said, as the sketches are, we think, self-explanatory. The strut sockets are welded to a wiring plate secured by two bolts passing through the spar, and in the

case of the point of attachment of the front skid struts these, it will be seen, no longer have square ends abutting on the flat of the front spar, but fit into sockets welded to a common base plate, thus practically being proof against any tendency to slip sideways along the spar. The diagonal bracing struts running from the



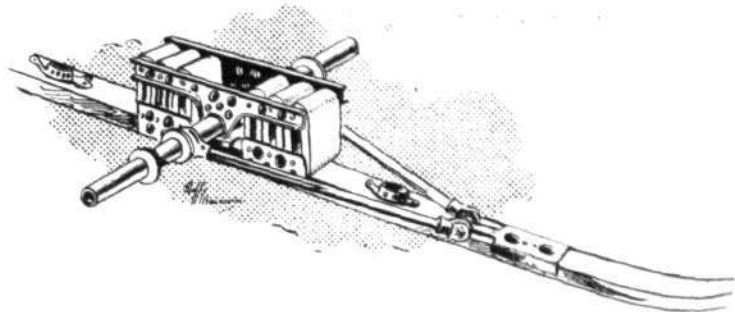
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Attachment of the tail booms to the rear spar of the top plane on the Ruffy-Baumann biplanes.

lower ends of the interplane struts to the extensions of the top plane are no longer made of a steel tube with forked ends, enclosed in a fairing of wood, but are made up of solid spruce, and fitted at the ends with a socket passing over and pivoted to an eyebolt.

One of the features noticed when looking over this machine is the arrangement of the shock absorbers, which gives the impression of being very simple and substantial. Instead of the usual round rubber cord, rectangular section rubber rings are used, each ring passing over two transverse bolts, of which one is held in the lower plate passing around the skid, while the other is secured to the two T-shaped flanged steel plates attached to and, of course, moving with, the wheel axle. In case of a heavy landing one or more of the rubber rings may be broken, but the replacement of a ring or two is an operation occupying a few minutes only, and costing very little. On the other hand, when a rubber cord breaks it usually means either a new cord or an unsightly knot in the old one.

Perhaps one of the most interesting, and certainly one

of the least apparent, features of the Ruffy-Baumann biplanes is the method of selecting each rib for the particular work it has to do. In other words, progressing from the wing-tips towards the centre, consecutive ribs are less elastic than the one preceding, so that at the tip, where less load is carried, the ribs are weaker,



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Sketch showing the shock absorbing arrangement on the Ruffy-Baumann biplanes. The wheels and chassis struts have been omitted for the sake of clearness.

gradually increasing in rigidity towards the centre. The consequence is that when the machine is flying, the trailing edge of the whole wing forms a straight line instead of bending down in the neighbourhood of the tail booms and up as the tip is approached. There can be little doubt that this form of construction has a very important bearing on the performance of the machine.

At present there are five biplanes, all fitted with dual control and having Gnome engines of 50 and 60 h.p., in commission at the firm's school at Hendon, where extra accommodation in the form of a large tent has been provided. It might be mentioned that it is only lack of housing space that limits the number of machines, and already a similar number are waiting to be erected at the firm's works at The Burroughs, Hendon. On a recent visit to the works we found workmen busy making foundations for machinery and digging pits for the shafting, and we understand that as soon as delivery can be obtained a number of wood-working machines of various types will be installed, when the output of machines should be greatly accelerated. As a matter of fact, considering the facilities, or rather lack of them, at this firm's disposal in the past, they have turned out the machines at a very good pace, and when the new machinery has been put in, which should be in a week or two, the output will be more than equal to the requirements of the school, leaving a margin for any outside orders that may come along.

THE "X" AIRCRAFT RAIDS.

THE following announcements have been issued by the Field-Marshal Commanding in Chief Home Forces:—

"X 37" Raid, July 9th.

"At 10.45 this morning a hostile aeroplane crossed the Kent Coast near the North Foreland, and flew a short distance westward. One of our anti-aircraft guns fired a few rounds at long range, whereupon the enemy turned east, and, flying at a great height, proceeded out to sea. Some of our aeroplanes went in pursuit, but were unable to overtake the enemy. No bombs were dropped."

"X 38" Raid, July 9th-10th.

"Shortly before midnight, July 9th-10th, enemy aeroplanes visited the south-east coast of England. From information at present available, about five bombs were dropped. No damage has been reported up to the present. Anti-aircraft guns engaged the raiding machines. No further details are yet to hand."

"There is nothing fresh to add to the two *communiqués* issued last night concerning yesterday's hostile air raids."

"The first raid over the Isle of Thanet at 10.45 a.m. was carried out by one seaplane. No bombs were dropped, and the raider made off, pursued by our naval aircraft. He was also fired at by anti-aircraft guns, but without effect."

"The second raid over the south east coast at 11.15 p.m. was carried out by one hostile aircraft. The raider dropped seven explosive bombs, but did no damage beyond breaking several windows. He made good his escape."

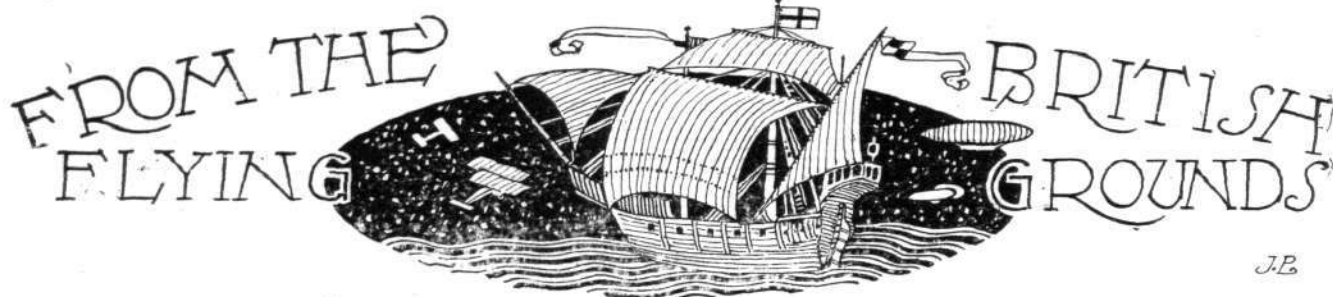
"There were no casualties of any kind in either raid."

German Version.

"Berlin, July 11th.

"On the night of July 9th-10th two German naval aeroplanes dropped bombs on the port establishments and coast works of Harwich and Dover."

[It is officially stated that no bombs were dropped on the port establishments or coast works, and the raid on Harwich is an entire fabrication.]



London Aerodrome, Collindale Avenue, Hendon.

Grahame-White School.—Straights last week with instructor: Messrs. Callard, Cockell, Drew, Edwards, Hodgkinson, Jamie, Keymer, Mulville, Mills, Rodocanochi, Ward and Lyles. Circuits with instructor: Messrs. Donald and Kay. Eights with instructor: Messrs. Cooper, Forster, Goodhart, Phillips, Turner and Wellinkar.

Instructors: Messrs. Biard, Hale, Manton, Pashley, Russell and Winter.

Beatty School.—The following pupils were out during last week: Messrs. Gliksten, Atkin, Kay, Venables, Whitmore, New, Edwards, Jones, Davy, Murdoch, Garlick, Mitchell, Elliott, Earl, Towson, Skeet, McPherson, Hoskins, White, Rudd, Gadsden, de Wilde, Curry, Hick, Wood, Sach, Owen, and Austen.

The instructors were Messrs. G. W. Beatty, G. Virgilio, A. E. Mitchell, and H. Fawcett; the machines in use being Beatty-Wright dual control and single-seater propeller biplanes, and Caudron dual-control and single-seater tractor biplanes.

Mr. Bruno Roberts flew for his certificate on July 4th.

Hall School.—Pupils out last week:—With Flight-Lieut. Bell: Messrs. Air-Mechanic Halliday, F. Smith, and Glegg. With P. G. Allen (late R.F.C.): Messrs. F. W. Smith, Orton, Lambert Barton, Lieut. Packman, Henley, Illingworth, and Lieut. Yuill. With Cecil M. Hill (Head Instructor): Messrs. Skinner, Duncan, Cottrell-Jones, and Lieut. Deane.

Machines in use: Hall and Caudron (Government type) tractors.

Royal Aero Club certificates taken by Air-Mechanic Halliday (R.N.A.S.), F. Smith, and Glegg; all excellent tickets, and passed in very good style with good landings.

London and Provincial Aviation Co.—Pupils rolling last week: Messrs. Mander, Leman and Bush. Doing straights: Messrs. Jones, Daly, Sivewright and Egerton. Circuits and eights: Mr. W. Evernden.

Instructors: Messrs. W. T. Warren, M. G. Smiles, L. H. Brake and W. T. Warren, jun.

Three tractor biplanes in use.

Royal Aero Club certificate taken by Mr. W. Evernden.

Ruffy-Baumann School.—School out every day last week.

Pupils with instructors: Williams (12 mins.), Fraser (68), Bebee (55), Westlake (20), De Balme (30), Wilson (48), Thomas (10), Durand (10), Homes (10), Babington Smith (10), Homes (12), and Fanshaw (12). Pupils doing solos and circuits: Fraser, Durand and Wilson. Instructors: E. Baumann, A. Baumann and André Thomsen.

Fraser took his ticket in good style, and Durand did half the tests.

On Saturday E. Baumann out testing new 60 h.p., and took several passengers.

Bournemouth School.

PUPILS rolling alone last week: Messrs. Fenn, Montgomery, Ross, J. B. Smith, Wingfield, Hinchcliff, Turner, Brandon, Green, Pritt, Hammersley, and Kennedy. Straights alone: Messrs. Little, C. Wilson, H. Smith, Barlow, Daniel, Scaramanga, and Adamson. Half circuits alone: Mr. J. Wilson.

Instructors: Messrs. S. Summerfield and Brynildsen. Machines in use: 35, 45 and 60 h.p. Caudrons.

Very little exhibition work was carried through during the week, mainly owing to the very bad weather. Several good flights, however, were made by the instructors.



A few Pilots who have recently secured their Royal Aero Club Certificates at the Hall Flying School, Hendon.—
(1) Mr. F. B. Taylor, (2) Mr. T. Dickson, (3) Mr. F. R. Rand, (4) Mr. H. L. Gaskell, and (5) Mr. A. Cosgrave.

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THE R.F.C. INQUIRY.

WHEN the R.F.C. Inquiry was continued at Westminster Hall on July 4th, the Chairman (Mr. Justice Bailhache) referred to a statement in one of the papers that General Sir David Henderson admitted there had been two cases of improper promotion, and that he (the Chairman) had added, "And a third." That, he said, was quite wrong. It was not admitted that there were two cases of improper promotion, but that there had been two alleged cases.

Mr. Balfour Browne said the suggestion of Mr. Pemberton Billing was not that the promotion was improper but was rapid.

Mr. Pemberton Billing agreed, and asked if he might supply the Committee with many instances of irregular reports to be cleared up in a like manner.

The Chairman: Don't. I do not want them. I did not want this one, but it was given to me, and I was obliged to refer to it.

The Chairman said that Lord Montagu was ready to bring certain mechanics to give evidence. He assumed that General Henderson's statement that pilots would not be prejudiced in their service career by giving evidence applied also to mechanics.

Sir David Henderson said that he had no objection, and the men would not be victimised. He suggested that he should be absent when the men gave evidence, and that he should be told what they said, but be given no names.

Major Sir Bryan Leighton, late lieutenant-colonel, R.F.C., called as a witness by Captain Bennett Goldney, M.P., said he had been flying since 1913, and joined the Royal Flying Corps in 1914. In May and June, 1915, he was at the front, attached to Headquarters. He came to the conclusion at the front that we ought to have had more and better machines. One never could have enough machines. As for their quality, the Morane "Parasol" was not a great success and the Voisin was afterwards discarded, though the French went on using them. A good machine in those days was the Nieuport. The sailors got most of them—the Navy had more money to spend. Very few Nieuports were ordered at that time for the Army. The squadron commanders at that time considered the B.E. 2 C. with R.A.F. engine the best they could get. He had been at the British Headquarters in Paris, where the naval wing of the air service was in charge of Flight Commander Thurstan, R.N.A.S., and the military wing was under Captain Valentine.

The Chairman: What were the relations between these two officers?—They were very strained while I was there. I found there was great rivalry in obtaining machines from French firms.

Were you friendly with both officers?—No. I scarcely spoke three words to Lieut. Thurstan. My information did not all come from Captain Valentine, because I heard it talked among other officers.

Mr. Bright: Was the ill-feeling entirely due to the rivalry with regard to orders?—Yes, I consider that was so. The Navy had more money to spend than we had, and I think that accounts for it entirely.

General Sir H. L. Smith-Dorrien: You mean that the Navy had a freer hand than you had in spending money?—Yes.

Replying to Captain Goldney, witness said that the Nieuport machines were not bought, because, according to gossip, the firm did not pay commission.

Mr. Shortt: Who was to get the commission? Capt. Valentine?—That was the report.

Mr. Butcher: The suggestion is, as I understand it, that an officer goes out to buy machines for the British Government, and does not buy them because he is not bribed. It is a shocking suggestion. Have you any foundation, beyond gossip, for it?—None.

You did not have it from any manufacturer—from the Nieuport people?—I was told, not by one person, but by several.

Did you have it from the Nieuport people?—They did not actually say so, but they inferred that in my conversation with them.

Mr. Bright: Do you think that that was the origin of the report?—No, I do not think so; I can only say that it was gossip.

Mr. Shortt: You did not seem to attach much importance to it at the time?—No, I did not; I did not go into it at all; it was not part of my business.

Sir David Henderson: You suggest that the rivalry between the Services was partly due to the Navy having more money to spend than the Army?—Yes.

Captain Bennett Goldney asked witness if discarded machines, which were known as "dud" machines, were being sent to the front for flying purposes when they were only useful for school purposes.

Witness replied in the affirmative, and said he had known of accidents to those machines.

Replying to Sir David Henderson, Sir Bryan admitted that he had not actually seen any of these "dud" machines sent home.

Sir David Henderson declined to accept the synonym that a "dud" machine meant a discarded machine, and contended that a "dud" machine was something quite different.

Captain Bennett Goldney contended that discarded machines were generally described as "dud" machines; it was not his suggestion.

Sir David Henderson: There is the discarded machine, but a "dud" machine is one that won't fly properly.

Sir Bryan Leighton asked whether he might say under what conditions he left the Flying Corps. He had no personal feelings against the Corps.

The Chairman: If you want to destroy a suggestion that has not been made, you can do so. If you wish to make a personal statement, I will listen to it.

Sir David Henderson said that if Sir Bryan insisted on going into the matter he should have to ask certain questions, and he suggested that it would have to be done in private.

The Chairman (to witness): Is it worth while?

The witness: I am in your hands.

The Chairman: No; I think it is not.

Lieutenant the Hon. Henry Lygon said that he had been an observer in the R.F.C. from January to May, 1915, and was afterwards in the ballooning branch, which he left because it made him sea-sick. He was now in the Yeomanry. He had a number of suggestions to make which were not grievances. As soon as an observer at the front got useful at the job he went home and learnt to fly, because only as a pilot could he get promotion. It was only since last autumn that observers had been part of the R.F.C. In order to give observers a proper position they should have been encouraged to remain by being given promotion. The alternative was to do away with observers altogether. Their duties were either reconnaissance, which might perfectly well be undertaken by officers of the Intelligence Department, or photography, which could easily be done by the pilot, or artillery spotting, which would be better done by artillery officers detailed for the purpose.

General Sir H. Smith-Dorrien: Artillery officers have their own duty, and if you use them as observers you will need to increase very largely the number available. I agree with your suggestion that unless an observer is in touch with the situation it would be difficult to obtain the right sort of report. I used always, in France, when an important reconnaissance was being made, to see the observer myself, so that he might intelligently reconnoitre the country and bring me back the information I wanted. That is what you mean?—Yes.

Would it not meet the case if the observers lived with the Intelligence Department rather than with the pilots?—Yes; that would bring them into touch.

In reply to Mr. Bright, the witness said there was something worth considering in the suggestion that observers should train as pilots, but he thought it a pity to take away observers who had become efficient in order to become pilots to get promotion.

Replying to Sir David Henderson, the witness said he was not aware that during the last six months the rule had been that an observer could be recommended for flight-commander. He knew that a very large proportion of observers wanted to learn to fly irrespective of pay or promotion.

Sir David Henderson's evidence was then resumed. He said that the finding of the Court of Inquiry into Lieutenant Tennant's accident was sent back because Lieutenant Tennant was not able in the first instance to give evidence. In the case of Second Lieutenant J. R. Chamberlain, killed in June owing to the wings of a B.E. 2 B. breaking in the air at Netheravon the first report of the Court of Inquiry stated that the wings broke in the air owing to abnormal strain caused by nose dive. The officer commanding the wing disagreed, and the machine was ordered to be re-examined, when it was reported that two cables had broken, which might have been caused by the air screw breaking in the air.

Mr. Billing: Is there any possible methods by which such accidents can be averted?—That is a very difficult question to answer. I do not think you can insure that such accidents can be averted.

You don't consider there was any negligence on the part of the inspection during building or flight?—No, I have no evidence but what is here.

Have the strains on the cable of such a machine been again worked out since the accident?—I do not think so.

If a second pilot was killed by the same kind of accident, would you go into the question of the strains on the cable again?—I should think very seriously indeed about it.

Do you always wait until two men are killed before you take precautions?—I took all precautions, and the subject was

carefully worked out, but if another man was killed I should very seriously consider what was the matter with the cable. The stress on the cable has been worked out before many times.

—When two are killed you would consider the matter again?—It is not a matter of men being killed, but of an accident happening. I have no reason to believe that the cable broke under undue strain.

Sir Charles Parsons: I have been an engineer for many years, and no engineer would make the insinuation Mr. Billing is making. It is not right to make these insinuations. There is no evidence that the cable was overstressed. There is nothing, to my mind, to show anything wrong with it at all.

With regard to an Avro which was upset by a gust of wind when too near the ground to enable the pilot to recover control, Mr. Billing stated that the R.N.A.S. had discovered a remedy for this spin.

Sir David Henderson said that there was a certain amount of exchange of information between the Services, but he should not like to say that it was as complete as he could wish. He would bring evidence to show what interchange had taken place. The Avro was not an inherently stable machine.

The Chairman questioned Sir David Henderson about the case of Lieutenant Littlewood, who landed a new machine in the German lines at Lille. He said that, as he understood it, Lieutenant Littlewood started from Farnborough, where he picked up an observer to take with him—an observer who had been left behind and was disappointed in going over with some other pilot on some other machine. Was it a fact, when sending over new machines to France, that somebody went with the pilot as a fighting man?

Sir David Henderson replied that that was so.

The Chairman: Does the pilot choose his own companion, or is somebody allotted him for this specific purpose?—The proper course is that somebody should be allotted to him.

It is the duty of somebody, I suppose, to make that selection?—Yes, sir.

Would that, in this particular instance, be the duty of somebody at Farnborough?—Yes.

I am very much puzzled how this man, if he was not a trained observer, got into this machine?—I am very much puzzled also. There appears to have been some misunderstanding. Whatever I find out will be put forward.

Is it anybody's duty at Farnborough when a pilot goes to France in a machine to see him start?—Yes.

The duty of some superior officer?—It is the responsibility of the Officer Commanding the Administration Wing. If he, for any reason, cannot be there, he must depute the duty to another officer.

He cannot go there and pick up a machine and beckon to somebody else and say: "I am going to France, come along with me"?—He cannot do that.

And, I suppose, it is also the duty of somebody at the starting point to see the class of map with which the pilot is supplied, and also the general equipment of the machine, such as compass, &c.?—Yes.

The public proceedings at the sitting on July 5th opened with the calling of Capt. Valentine, R.F.C., as a witness. Replying to Sir David Henderson, he said he began flying in 1910, had flown in the circuits of Europe and Britain, had flown fifty different types of machine, and was still flying. He joined the R.F.C. at the beginning of the war, and in October, 1914, was sent to Paris to organise a department for the supply of machines and engines. He had to report to headquarters all machines and engines likely to be of use to the R.F.C. In cases where machines were thought suitable a pilot was sent from headquarters to test them. Orders to buy came from General Headquarters in the Field.

Sir David Henderson: It has been suggested that you recommended that the Nieuport machines should not be bought. Was that so?—No.

The Chairman: It has been suggested that you failed to recommend the Nieuport for purchase.

The Witness: I reported it as a good machine, as I did other machines. In some cases machines were bad, and I so reported.

The Chairman: Was there ever a question between you and the Nieuport people as to receiving a commission from them?—Never.

Did you ever intimate to them in any shape or form you would be prepared to take a commission?—Never.

Did they offer a commission or hint about it?—Never.

Did you take a commission from any other people?—Never.

Did you ever take a commission in respect of any machine you reported about?—Never.

What were your instructions with regard to your dealings with the Navy?—I was ordered to be on good terms with them, and to work in conjunction with their representative, and generally to see that we did not clash. I was not to compete in any way which would restrict the output or affect the Flying Corps in any way. It was arranged that the price at which machines should be purchased should be the prices fixed by the French Government.

Sir David Henderson: Did I give you any personal instructions about competition?—Yes, sir.

What were they?—I was not to compete, so that either the output of the Naval or the R.F.C. should be interfered with in any way, or that it should annoy the French Government.

The Chairman: Did any friction arise between you and Commander Thurstan as representing the Navy?—Commander Thurstan tried to get as much material as he could, even before the French prices were fixed and the competition became accentuated.

What were your personal relations?—I myself was always as friendly as possible with Commander Thurstan.

Did you complain to him about what he was doing to the disadvantage of the Flying Corps?—I very often spoke to him about it.

Did that lead to friction?—I don't think he quite liked me speaking to him.

Mr. Bright asked General Henderson if it was the custom for any commissions, secret or otherwise, to be offered to, or accepted by, officers in the R.F.C.?—Certainly not.

Replying to Captain Goldney, M.P., the witness said he understood that when his report on the Nieuport machine was made it was found that the firm was very busy with orders from the French Government, and that the latter were reluctant to the Flying Corps or the Navy having machines delivered to them from that source, as their requirements were so numerous.

M. Bazzaïne, one of the managing directors of the Nieuport Company, was called, and emphatically denied that there had ever been any conversation with Captain Valentine with regard to the payment by his firm of a commission to him.

General Smith-Dorrien said he thought that Major Sir Bryan Leighton should make a public apology to Captain Valentine.

Mr. Butcher: It was a gross charge, but he did not put it forward as a direct charge so much as the result of gossip.

Mr. Shortt added that Sir Bryan Leighton did not make the statement voluntarily; he was asked about it.

Mr. Balfour Browne: It is rather our fault that the statement was allowed to be made, because Sir Bryan distinctly stated it was gossip.

The Chairman: We are all agreed—and I am very pleased to state it publicly—that we are perfectly satisfied with Captain Valentine's very clear statement, and we have not the slightest doubt that the story has not the slightest foundation.

Captain Noel Sampson was called to speak to the accident to Major Penn Gaskell on January 31st, on the occasion of a Zeppelin raid. Orders were received from the War Office to send up pilots if the weather permitted. Major Gaskell told the witness not to go up until he had had a "chucker" round first. Major Gaskell had been up at night very often on the same type of machine—B.E. 2 C. He believed that Major Gaskell got into the low mist and lost sight of the flares. He caught the tops of some trees, which brought him down.

Captain W. R. Barker gave confirmatory evidence.

Mr. Billing inquired as to the system of lighting of the ground.

The Chairman ruled that the question could not be put in public.

Mr. Billing protested, and asked how the charge of negligence could be investigated if these details were not gone into. This accident happened six months ago, and the information could be of no value to the enemy.

The Chairman said that he had given his ruling on the point, and invited Mr. Billing to proceed with his cross-examination.

With regard to the death of Major Unwin, Captain Valentine was recalled, and said that he taught him night flying. He was a quite qualified night pilot, and a very courageous man.

Staff-Sergeant Stubbins said that Major Unwin hit a tree on a B.E. 2 C. The machine caught fire. There was a slight ground mist, but he could see the machine 400 ft. overhead. He did not think there was any danger from the fog that night. The flares were quite clear.

Sir David Henderson then dealt with the case of Captain Warren, who was alleged to have been shot down because the machine could not climb fast enough. Captain Warren with two others went before daylight on a bombing expedition well within the enemy's country. It was foggy, and the pilot had to descend very low to accomplish his object.

The objective was well protected by anti-aircraft guns, and the result was that Captain Warren was shot down and his leg broken. He had been mentioned in orders for his gallantry.

Mr. Billing asked if it was absolutely necessary that Captain Warren should be sent on this particular expedition that morning.

Sir David Henderson replied that it was not absolutely necessary, but in the opinion of the Higher Command it was necessary. He considered the machine used was the most suitable for the work.

The Chairman said it did not seem to be a question of the machine, seeing that the pilot was shot down from a low altitude, which was necessary for him to carry out his objective.

Mr. Billing contended that it had everything in the world to do with it.

The Chairman replied that they would not argue the point.

Sir David Henderson said he had never admitted that he would not under certain circumstances refuse to send up a pilot. In regard to the second fatal case Sir David Henderson said the accident was not due to a defect in the machine, but to the explosion of a hand-grenade, and the machine fell within our lines.

Replying to Mr. Billing, Sir David Henderson said that pilots were at one time allowed to carry hand-grenades without permission, but he rescinded that order. He could not say whether this was prior to the accident or not, but he did not recollect that there was any evidence of disobedience, and probably Captain Hughes had authority to carry grenades.

The Chairman intimated that they had now arrived at a point when Sir David Henderson's evidence should be taken *in camera*. But before doing that they would permit Captain Bennett Goldney or Mr. Pemberton Billing to ask any questions on the specific cases which he had dealt with in public. If they wished they could reserve any questions until Monday, and in the meantime they could consider what questions they would wish to ask.

Mr. Billing asked whether he would be allowed to be present while General Henderson was giving his evidence *in camera*.

The Chairman: No, there are matters which only concern the Commission on which we desire to examine the witness.

Mr. Billing: General Henderson was present during my evidence *in camera*.

The Chairman: All your specific allegations have been dealt with in public in the evidence given in your presence, and you will be permitted to ask questions on these.

Mr. Billing said he would like to hear if any reference was made to himself personally.

The Chairman said they had had a most exhaustive examination as to all allegations which Mr. Pemberton Billing had made, and he (the Chairman) would take care that any further reference to these would be duly considered.

Mr. Billing said he had sufficient questions to last a whole day.

The Chairman: If you ask any now you will not be allowed to ask them again on Monday.

Mr. Billing said he would reserve his questions until Monday.

Sir David Henderson said, in reply to Mr. Bright, that he had taken a full course of engineering at Glasgow University before he joined the Army, and for ten or twelve months he was in Lord Kelvin's laboratory. He had been employed for twenty months in the Royal Engineers building defences at foreign stations, and from then until he became interested in aeronautics, in 1911, he had had no further practice or study.

In reply to a question by Mr. Bright, the witness said that there would always be most violent differences of opinion between pilots in the matter of design. With regard to Mr. Bright's suggestion that it might be good to have an Ordnance Board for choosing machines similar to that at Woolwich for choosing guns, Sir David Henderson pointed out that he had dealt in artillery for centuries, and there were not in existence in this country, to his knowledge, the *personnel* for forming such a Board as was suggested. Since Mr. Billing had referred to the fact that he (General Henderson) had never flown over the enemy's lines, he should like to state that when he went to France he was personally forbidden by the Field-Marshal commanding ever to go up over the lines so long as he was in command. Lord French could be called to corroborate that statement.

Mr. Billing said there was nothing personal in the comment which he had made. He had been obliged to ask the question.

The Committee then continued the sitting in private, and held sittings on the three following days.

At the resumption of the public sittings on July 10th, the Chairman explained that the Committee had been sitting *in camera* for the past days to hear evidence partly from General Sir David Henderson, about matters that it was thought it would not be wise to take in public, and also from several gentlemen who were members of the Flying Corps, who had a natural reluctance to come forward in public so that their names would appear. There was a fear that it might have a damaging effect on their careers. Their evidence was taken in the absence of General Henderson.

While *in camera*, one or two cases that had been made the subject of charges in public were mentioned, and these would be dealt with in public. The two most important instances related to charges in reference to accidents that had happened to flying men—charges in particular by Mr. Pemberton Billing.

The first case was that of Lieut. Brock, killed at Birmingham. The charge was that the machine made a spiral skim and nose-drive, and the suggestion was that the reason of that was because it was a B.E. 2 C machine, and because it was said that that was the

way these machines had a habit of behaving. As a matter of fact, according to the evidence before them, the machine was not a B.E. 2 C at all, but an Avro.

Mr. Billing: I distinctly stated in the House that I could not give the name of the machine.

The Chairman: I am confining myself to what you said in the House.

Mr. Billing: Did I say that it was a B.E. 2 C?

The Chairman: You said it sounded like a B.E. 2 C, because that was the way the machine behaved.

Mr. Billing: I did not say that it was, but that the accident sounded like a B.E. 2 C.

The Chairman added that the other case was that of Lieutenant Downing, killed at the Central Flying School. This was a case again of a nose dive, and into the accident there was the usual inquiry. The finding was that Lieutenant Downing lost his life owing to the machine nose diving and striking the earth. The machine was in proper flying order, and the engine running satisfactorily. The controls were intact and in working order at the time of the accident. There was no evidence to show why the machine should nose dive. It was a B.E. 2 B., which was not a stable machine.

Mr. Pemberton Billing said he had said that this machine made the usual B.E. spiral. He did not say either that it was a B.E. 2 C. or a B.E. 2 B. Was he to understand that this statement was unjustified?

The Chairman: You are to understand neither one thing nor the other. I am only telling you the evidence given *in camera*, and I am reading it out because it was a piece of evidence which should have been given in public. I really thought that I had made that quite clear.

Sir David Henderson was then cross-examined by Mr. A. Lynch, M.P.

Mr. Lynch: Are you content with the present output of aeroplanes?—No.

In what direction do you think there might have been more efficiency?—I should like to see a better all-round efficiency.

In what direction do you find deficiencies?—I do not find particularly any deficiencies, but I should be glad to have more.

Machines, pilots, and, in fact, everything?—Chiefly engines.

Do you think that in any circumstances, and with the very best possible organisation, and with the greatest energy of work, it would have been possible that we should have at the present moment 20,000 aeroplanes?—No, I don't think it possible, because you have got to have engines, mechanics, and pilots as well as machines.

Do you think any scheme could have been devised if that object were kept steadily in view with the determination on the part of everyone concerned to realise it, to train the requisite number of pilots?—No.

That being so, could you put your finger on the main obstacle against the realisation of such a project?—There are various obstacles, and I do not know I could call the provision of pilots a serious one. There is the provision of mechanics—with the competition of munitions, &c.—the provision of engines, and certain parts of the aeroplanes are difficult to buy in quantities for the same reason.

Asked as to whether in the case of an inventor producing plans of a proposed new machine a communication would be sent that the Government would do nothing until the machine was produced and had been flown by him, witness said that in certain cases that would be done. Unless there was a fair chance of an invention proving valuable they had no time to go into the matter. If a struggling inventor wanted information he could go to the National Physical Laboratory and get it. Extremely good ideas had come from private firms, but he could not say whether they were under Government control. He denied that the attitude of the Government had been to refuse help until inventors were in a position to show that they had no need of help at all. He thought experiments with large machines ought not to be abandoned.

Mr. Lynch named a private firm whose activities, he alleged, had been hindered by "back-stairs policies."

The witness said that one of the directors of the firm would be called.

Mr. Lynch: Is there now a British machine superior to the Fokker?—Yes, there are British machines at the front superior to the Fokker.

Since when have they become superior?—At the start we had machines equal to the Fokker, and about February or March this year we had a very large number of superior machines to the Fokker.

Was the Fokker machine first offered to this country?—No, not the first; but I sent two officers over to Holland to see it, and their report was very unsatisfactory. The designer of the Fokker did not improve his machine until the war was pretty well under way.

The designs were all very bad until the inventor copied the Morane.

Was there no time when the Germans had an incontestable superiority at the front on account of their Fokker?—No. Never.

Was there never a period when the number of British machines brought down by the Fokker was greater than the number of German machines brought down by us?—Yes; but not very much greater. But that does not prove any superiority.

What was that due to?—To a difference in methods employed. We were doing the work of the Army and the Germans were not; they were trying to stop us from flying over their lines.

"There's no harm in saying now," added General Henderson, "that we first began aerial artillery observation when we reached the Aisne, after the battle of the Marne. Before then we did nothing."

Captain Bennett Goldney, M.P., next took up the cross-examination, quoting a remark by General Henderson to the effect that dropping bombs over towns was opposed to the ethics of war. The witness replied that he no more expected bomb-dropping for other than military reasons than he expected poison gas or other things that the German had used.

General Smith-Dorrien pointed out that Captain Goldney said on June 27th that a grave charge against the administration of the R.F.C. lay in the issuing of instructions to officers that they were not to supply information to members of Parliament. He wished to know whether General Henderson ever issued such an order?—Sir David Henderson: Never. He had never heard of the order. He thought all officers on the home stations were advised not to give information, but that was not specially directed against members of Parliament.

Capt. Goldney said that his information was that the order was issued by a colonel at the War Office, and that young officers were warned that if they did give information it might prejudice their advancement.

Mr. Pemberton Billing intimated that he had several questions to put to General Henderson. He asked if a certain very highly placed officer, in reply to a question by a member of the Committee about the B.E. 2.C, said that she was a very suitable machine at over 1,000 ft. What do you think he meant by that?

Sir David Henderson: I do not know that he said it. I do not know what you are talking about.

Questioning General Henderson as to the statement that it was against his personal wishes that he took over the command of the R.F.C., as he thought a younger man, more in touch with practical aspects of flying, should occupy the position, Mr. Billing asked: "Who do you think is the best judge of a man's fitness?"

The Chairman: That is not a question he can answer.

Mr. Billing: I suggest that it is best left to the man himself.

General Sir H. Smith-Dorrien: It is not everyone who makes a habit of blowing his own trumpet, Mr. Billing.

Mr. Billing: Surely.

Sir David Henderson, answering further questions, said that he encouraged the development of high-power engines long before the war. He characterised as "grossly untrue" a suggestion that he placed orders for Aircraft Factory machines which were greatly inferior to designs by private firms. He had long been of opinion that an experimental base, such as that in France, would have been useful, but he thought they would now be able to work on their present lines.

"Can I call evidence to rebut Mr. Billing's statements?" asked Sir David Henderson later. "He is giving evidence again."

The Chairman: The difficulty is that Mr. Billing is not used to putting questions, so we must allow him quite an unusual latitude.

In regard to the relative advantages of Government machines and privately-made machines, Mr. Billing asked Sir David Henderson if he would be convinced by the evidence of pilots as to superiority of privately-made machines.

Sir David Henderson: I have far better chances of being convinced by pilots than you have, Mr. Billing.

Was there any time when our superiority had been challenged?—Not successfully. Our pilots had always been able to carry out the work of the Army to the satisfaction of the Commander-in-Chief.

But with extreme loss to our men and machines?—Not extreme loss.

Would the loss have been less if we had had better machines?—Possibly, but not certainly. If we had had more machines we should have done more work.

Have any of our men had to engage the enemy with slower machines?—Yes.

Are the fighting machines we are at present employing as fast as the enemy's?—Yes.

The F.E. 2, for instance; is that as fast as the new biplane Fokker?—No. Even fighting machines have to be put into classes.

Would it surprise you if I tell you that the biplane Fokker can

climb the first 10,000 ft. in, possibly, 10 mins.?—I should be inclined to doubt it.

Its speed at 1,000 ft. is about 109 miles an hour?—Possibly, but not probably.

The Chairman: Is not an effective reply the performances of our aeroplanes at the front during the past week? We apparently now have a complete mastery of the air at the front. That does make these questions of a rather academic interest.

Mr. Billing explained that most of his references were to six months ago, not to to-day. He had no doubt that as we are now employing better machines, our performances at the front are rapidly improving.

Mr. Billing asked if the Committee were not, prior to the inquiry, conducted round certain aerodromes.—Yes.

One staff officer was told off to each member of the Committee?—That is not right.

Mr. Butcher: Speaking for myself, that is quite untrue.

The Chairman: It is really too funny.

Mr. Billing: I am asking for information.

The Chairman: Well, do not ask silly questions like that.

The Chairman intimated that he wished to make public replies to two further questions raised in private. There was no truth in the statement that 74 pilots were brought back from France for further training. The criticisms with regard to the unsuitability of one of the landing grounds for pilots were, in substance, correct, but another ground of more ample dimensions had been, or was being, obtained.

Mr. Billing went on to ask General Henderson about the opinion he once expressed, that the dropping of bombs here and there over London was opposed to the ethics of warfare.

Sir David Henderson said he had anticipated that the only time the enemy would be able to raid efficiently was by day.

Mr. Billing: You never thought Zeppelins would use the night time?—No; but I thought they would not come to this country to drop bombs promiscuously on inhabited parts of the country, because I thought the German was a civilised person. He has proved that he is not.

At one time considerable difficulty was experienced by persons calling at the War Office for interviews. I have that on very good authority.—I am afraid I cannot accept the statement on that ground. What authority?

He is sitting before you now. I am the authority.—Are you the authority?

Mr. Billing asked Sir David Henderson if he was in favour in his reports to the Committee of Imperial Defence of the development of the rigid airship.

The Chairman: You must not ask a question concerning a confidential report.

Mr. Billing: Then General Henderson is not to answer that question?

The Chairman: No.

Mr. Balfour Browne: The Committee are in a position to answer that question because they have the report before them.

Mr. Billing: Perhaps the Committee will answer the question then!

Mr. Balfour Browne: We are not being cross-examined yet, Mr. Billing.

Mr. Billing asked Sir David Henderson if he would state the salary of a certain high officer in the air service. Sir David declined.

The Chairman: We are not going to inquire publicly into a man's salary. I may say we are not going to inquire privately into it either, Mr. Billing.

The Chairman proceeded to refer to other matters which had been considered *in camera*. With regard to a Zeppelin raid in January, he said the evidence showed that thirteen machines ascended, seven were damaged, four pilots were injured, and two (Major Penn-Gaskell and Major Unwin) were killed.

Mr. Billing resumed his cross-examination of General Henderson, and asked him if he did not find it difficult to decide on questions connected with the design of engines at the R.A.F.?—Yes, all my work is difficult.

Aeroplanes are frequently damaged through being unable to get out of range of gunfire?—That is quite untrue.

What proportion of British-built machines were employed by the Army when war broke out?—More than half were British-built, but only a small number of engines were made in England. None was of English design.

Mr. Billing said that Sir David had persisted in ordering machines that were inefficient.

Sir David Henderson: I cannot allow that to pass. The idea that a machine is necessarily superior because it is faster and climbs better I cannot admit for the moment. For war purposes there is very much to be considered. If I am going to get a machine with a speed of 120 miles an hour and capable of climbing 1,000 ft. in five minutes, it is a very nice machine, but if it breaks away every

time it goes up or has to be flown by a special pilot, it is useless. The only point about the superiority of machines is success in beating the enemy.

Mr. Billing asked Sir David if he was not in a position, before the war, to influence the Treasury to make grants to develop aviation.

"Far from it." He spent the money voted for aviation, he added, in the way he thought best.

Mr. Billing: Then you are not to blame for our unreadiness?

Mr. Billing was occupied for some time in reading through his notes, and apologised for keeping the Committee waiting. "I have had certain military duties to attend to in the interval," he said, "and they have rather interfered with the preparation of my papers. I should like my further cross-examination postponed."



AVIATION IN

The Lost Aeroplane.

MR. GWYNNE, on July 4th, asked whether a flying machine of the latest type was recently sent from Farnborough to France in charge of a pilot who had never been abroad before; whether the officer informed the authorities beforehand that he did not know his way; whether he lost his way and eventually landed by mistake in the German lines; and, if so, what steps, if any, have been taken to avoid our newest machines being handed over to the Germans within a few hours of completion?

Major Baird (representing the Air Board): The facts are as stated, except that from the inquiry held it does not appear that any protest was made by the officer in question. The circumstances under which the incident occurred are as follows:—A batch of machines of a well-known type had been fitted with a new type of engine. These machines were urgently required at the Front, and a number of officers were detailed to take them over to France. Some of these officers had done the journey before, others had not: all were qualified cross-country pilots trained to fly the type of machine in question. The particular officer referred to graduated as a pilot for this type of machine after thirty-two hours' flying, which is considered an ample amount. His report showed him as efficient and a good cross-country flier. The need for machines in France is so great that it is impossible to keep them back until officers are available to fly them over who have previously done the journey, which, moreover, is not considered a difficult one for a trained cross-country pilot. To take a machine across is an ordinary incident in a pilot's duties, and as many as twenty-four machines have gone over in one day lately. Such regrettable incidents have occurred to the Germans also, who recently presented us with a brand new Fokker. There is no means of avoiding them altogether in war times, but every care has been taken and will continue to be taken to reduce the risk of their occurrence to a minimum. The pilot in this case evidently lost his way, and it appears from a letter received by his parents from him that his machine was hit and rendered unmanageable by fire from the ground as he was descending. Otherwise, on discovering his mistake, he might have got away.

Mr. Ash'ey: Was the pilot supplied with the usual map, or was it an out-of-date map?

Major Baird: I anticipated some curiosity on that point, and consequently I have taken the precaution of providing myself with a copy of the map, which I shall be prepared to show to my hon. and gallant friend. It is the Ordnance Survey map as used by the general staff and supplied to pilots.

Mr. R. Gwynne: Will the hon. and gallant member say whether there was an observer on board, and, if so, had he any experience of the route?

Major Baird: Yes, sir, there was an observer on board, but he had no more experience of the route than the pilot. It is not a question of knowing the route any more than you can expect the man who takes a ship to New York to know the road to New York. It is a question of knowing the navigation. This pilot was qualified as an aerial navigator, and he should have had no difficulty in finding his road.

Mr. MacCallum Scott: Was the passenger an observer, or simply a passenger?

Major Baird: I should like notice of that question.

The R.A.F. Report.

MR. ASHLEY, on July 5th, asked whether the Committee appointed to inquire into the working of the Royal Aircraft Factory at Farnborough has concluded its investigation; and, if so, when will the Report be published?

Major Baird: The Committee has concluded its investigation, and its report will be laid before the House at an early date.

Enemy Air Raids and Railway Employees.

MR. THOMAS asked the President of the Board of Trade

The Chairman said they could not ask General Henderson to attend again.

Mr. Balfour Browne: I understand that the only military duty you have performed is to receive 2s. 9d.?

Mr. Billing: Two shillings and sevenpence, sir. He protested against the Committee's decision, and said he had about 200 pages of evidence to go through.

The Chairman said the Committee were not responsible in any way for other things that had caused Mr. Billing to be unprepared, and while they regretted that anything should militate against the preparation of his case, they must proceed with the inquiry.

The Committee then sat in private, and afterwards adjourned till the following morning.



PARLIAMENT.

whether he is aware that the agreement made by him with the Railway Executive Committee whereby the railway companies under their control should compensate men injured by hostile air raids or bombardment on the same basis as that on which compensation is payable under the Workmen's Compensation Act has not been made retrospective so as to cover the cases where such injury had already occurred; and whether, therefore, he will take the necessary steps to extend this measure of justice to all men who have suffered such injury whilst following their employment?

Mr. Harcourt: I will communicate with the Railway Executive Committee on this point, and inform my hon friend in due course of the decision arrived at.

Why Names of R.F.C. Pilots are Withheld.

MR. R. MCNEILL asked the Secretary of State for War who were the British aviators who succeeded in bringing down the German, Captain Immelmann, and why their names have not been already published?

Mr. Forster: It is not customary to mention in *communiqués* the names of officers or soldiers who perform acts of gallantry, and it is not considered desirable that an exception to this rule should be made in the case of officers of the Royal Flying Corps. The Commander-in-Chief mentions in his despatches the names of those whose actions or services justify special mention.

The Government Aircraft Insurance Scheme.

MR. WING, on July 6th, in the House of Commons, asked the President of the Board of Trade if it will be possible to reduce the premiums of air-raid insurance?

The First Commissioner of Works (Mr. Harcourt): As stated, in answer to a question by the hon. member for Blackburn on May 24th, the aircraft insurance scheme, which came into operation in July last, has at present money in hand, but that position may change at any moment. It is not proposed to increase the rates, but it would not be wise to reduce them.

Mr. Tickler, on July 10th, asked the President of the Board of Trade if he is aware of the hardships suffered by residents on the East Coast, by reason of their having to insure against aircraft raids and bombardment risks; and if he will grant them the privilege of being allowed to pay their insurance premiums by half-yearly or quarterly instalments, as the payment of the full yearly premium presses hardly upon the class of people residing in these districts?

Mr. Harcourt: While I sympathise with the hon. member's desire to make the payment of aircraft insurance premiums as easy as possible, I fear that it would not be possible at this stage to arrange for the annual premiums to be paid in instalments. The premiums are very small, and any system of payment by instalments would increase the working expenses out of all proportion.

Mr. Hogge: Why does not the Air Risks Insurance give the usual days of grace for the repayment of the premium?

Mr. Harcourt: That is rather a complicated question. I have already explained the matter to my hon. friend.

Sir Leo Chiozza Money asked what the Aircraft and Bombardment Insurance Fund amounts to; what has been paid out of it to the insured; what proportion of it has been absorbed by expenses and the commissions of the various insurance agencies; and what is the number of insured persons or firms, so far as the particulars are available, and the latest possible date?

Mr. Harcourt said that the number of policies issued under the Government Aircraft Insurance Scheme up to the end of March, including those issued through the Post Office, was about 1,884,000. In the case of insurances effected through an approved company, a remuneration of 10 per cent. of the gross premium is paid to the companies. In addition, a commission of 5 per cent. is paid to agents. The other figures could not be given.

THE FLYING SERVICES FUND—ADMINISTERED BY THE ROYAL AERO CLUB

THE Flying Services Fund has been instituted by the Royal Aero Club for the benefit of officers and men of the Royal Naval Air Service and the Royal Flying Corps who are incapacitated on active service, and for the widows and dependants of those who are killed.

The Fund is intended for the benefit of all ranks, but especially for petty officers, non-commissioned officers, and men.

Forms of application for assistance can be obtained from the Royal Aero Club, 166, Piccadilly, London, W.

| Subscriptions. | £ | s. | d. |
|---|--------|----|----|
| Total subscriptions received to July 4th, 1916 ... | 10,750 | 0 | 4 |
| Collected at the Westland Aircraft Works, Yeovil (Thirty-ninth contribution) ... | 0 | 17 | 7 |
| Employés of Ruston, Proctor, and Co., Ltd. (Ninth contribution) ... | 1 | 10 | 0 |
| Offering from a Church of England Service of Holy Communion of the Royal Flying Corps, S. Farnborough ... | 1 | 4 | 0 |
| Total, July 11th, 1916 ... | 10,753 | 11 | 11 |

166, Piccadilly, W.

B. STEVENSON, Assistant Secretary.

PERSONALS.

UNDER the above heading will be published weekly particulars of a personal character relating to those who have fallen or have been wounded in the country's service, announcements of marriages and other items concerning members of the Flying Services and others well known in the world of aviation. We shall be pleased to receive for publication properly authenticated particulars suitable for this column.

Casualties.

Flight-Lieutenant J. L. P. ARMSTRONG, previously reported missing, is now stated to have died of wounds. He was the only son of Mr. John Lewis Pasteur Armstrong, of The Bury, Felsted, and of Mrs. Armstrong, of North House, Dunmow. Educated at Felsted, he was afterwards a pupil of Messrs. Vickers, Sheffield, for five years. At the outbreak of war he joined a unit of Mechanical Transport. Later, he was transferred to the Royal Flying Corps, and, gaining his "Wings" about six weeks ago, he was sent to the Front. His commanding officer wrote: "He had just distinguished himself greatly by destroying a Fokker behind the German lines. He is a splendid fellow, and was very popular in the squadron. I always looked upon him as one of the most gallant of my pilots, who could be relied upon to do anything."

Captain GEOFFREY GASKELL BLACKBURN, West Yorkshire Regiment, whose death is announced, was the second son of Mr. H. Gaskell Blackburn, Bank House, Horsforth, a member of the firm of Messrs. H. W. and J. Blackburn, accountants, Leeds. He was a brother of Flight-Lieutenant Vivian Gaskell Blackburn, who took part in the air raid on Cuxhaven and during the destruction of the "Königsberg" in East Africa. He was 27 years of age, and joined the regiment at the beginning of the war.

Second Lieutenant SHARP, who has been killed in action, was the youngest son of Mr. and Mrs. T. Sharp, of Oakdale, Leamington. Originally a member of the Royal Flying Corps, he transferred to the Lincolnshire Regiment, and had been in France about eighteen months. Before enlisting on the second day of the war, he was on the staff of the London City and Midland Bank at Moreton-in-the-Marsh. Lieut. Sharp was educated at Grantham School.

Second Lieutenant REX SHERWELL, R.F.C., killed on July 3rd, aged 18, was born September, 1897, and was educated at Tonbridge School. He was captain of the cricket eleven 1915, and played for Lord's v. The Rest in that year. He received his commission in the Lincolnshire Regiment in October, 1915, and was gazetted to the Royal Flying Corps in May last. He was the tenth son of Mr. and Mrs. T. Yeo Sherwell, of 40, The Avenue, Brondesbury, and brother of P. W. Sherwell, the South African cricket captain.

Second Lieutenant CHARLES THOMAS HINTON VAISEY, R.F.C., who died of wounds on June 30th (received while flying over the German lines the previous day), was the eldest son of Dr. and Mrs. Vaisey, of Winslow, Bucks. He was 30 years of age, and was educated at Trent College, Derbyshire, and was sheep farming in Australia when war broke out. He came home a year ago in order to join the Flying Corps. His two brothers are also serving in France. In a letter written to his father, the Observer—who was with him at the time he was wounded, and whom he brought safely back—says: "He was badly hit almost in the first burst of fire from the three hostile machines which attacked us. At first I thought he was all out—but somehow he pulled himself together and brought the machine some eight or ten miles back to the aerodrome, where he made a perfect land. God knows how he did it—for he was in awful pain."

Lieutenant HAROLD LEIGH WALLIS, R.F.A., attached R.F.C., who was killed while flying on July 2nd, aged 22, received his commission in the R.F.A. in April, 1915, and was attached to the Royal Flying Corps last January. He was educated at Repton and the Royal School of Mines, Kensington. He was the youngest son of the late William E. Wallis, A.R.I.B.A., of Caterham, and of Mrs. Wallis, residing at 2, Vicarlands, Moffat, Scotland.

Married and to be Married.

The marriage of Lieutenant C. E. CHARLTON-ANNE, R.F.C., son of Major Anne, of Burghwallis Hall, Yorks., to Miss A. C. E. MILLER, only daughter of the late John Alexander Miller, of Edinburgh, took place at St. Mary's Church, Cadogan Gardens, on Thursday, July 6th. The bridegroom was attended by Lieut. Col. L. E. O. Charlton, C.M.G., D.S.O., of the Royal Flying Corps, as best man. In the absence of the bride's brother—Lieut. W. J. A. Miller, R.F.A. (Canada), who is serving on the Canadian Staff in Flanders—the bride was given away by Mr. S. Greenlees. She was attended by Miss Phyllis Holman as bridesmaid, and Sir Richard Levinge, Bart., as page. A large number of guests were present at the church and afterwards at the reception given at 8, Wilton Place, S.W., by Capt. R. C. Rome, R.F.A., and Mrs. Rome—the house being kindly lent for the occasion by their uncle, Mr. S. Greenlees.

Items.

Second Lieutenant W. D. M. BELL, R.F.C., who has just been mentioned in despatches—as recorded in "FLIGHT," July 6th—is a member of a well-known Scotch family, and, together with two of his brothers, fought in the Boer War. Subsequently, he found an outlet for his roving disposition in big game shooting in East Africa, where he owns some property. He is one of the best known big game hunters in the world, and is a marvellous rifle shot. When war broke out he was up country on a shooting expedition in the French Congo, but immediately he heard of the outbreak of war he returned and took up flying, and for some time was stationed at Castle Bromwich. His interest in flying was first aroused by the reports which reached him in East Africa of Paulhan's flight to Manchester, and he cabled home to Coventry, asking that an aeroplane and a large quantity of petrol should be sent out to him. He was informed that considerable tuition would be necessary, so came home for this, and attended at a flying school for some months at a time when pupils received only a few minutes' flight every month. This was not good enough for him, so he went back to Africa again. He knows most of the country and languages of East Africa.

Second Lieutenant McCubbin, who was responsible for bringing down Immelmann, the crack German air pilot, is only 19 years of age, and is the son of Mr. David A. McCubbin, of Johannesburg, and a grandson of Mr. James T. McCubbin, of Bootle. He joined the R.F.C. this year as mechanic, but obtained rapid promotion. He was educated at Johannesburg College. He endeavoured to join the forces in South Africa at the beginning of the war, but the authorities at Cape Town refused to take him on account of his age. Subsequently, his father gave him permission to come to England to join the Royal Flying Corps, which he did in February. After flying at Hendon and other places in this country, he went to France about two months ago, and had the luck to come in contact with Immelmann, with the result already known. After he had despatched Immelmann, Lieutenant McCubbin was wounded, and is now in hospital in England, where he is reported to be progressing favourably.

Through the War Office and the help of the American Ambassador, a gold cigarette case—which was in the possession of Second Lieutenant R. BARTON, of the R.F.C., when he was killed in aerial combat and fell within German lines—has been restored to his father, Mr. A. E. BARTON, of Red Court, Carnforth, Lancs.

AIRCRAFT WORK AT THE FRONT.

OFFICIAL INFORMATION.

British. *British Headquarters (France), July 4th, 10.55 p.m.*

"Yesterday our bombing aeroplanes successfully attacked the important railway centres at Comines, Comblès, and St. Quentin. Our offensive patrols, working far into the enemy's country, encountered hostile aeroplanes in great numbers, and much fighting took place. Four of the German machines were brought down in their own lines, and at least three others were driven to the ground damaged. We have suffered no further losses beyond those already reported."

British Headquarters, July 6th, 9.30 p.m.

"Low clouds have interfered with aeroplane work, but in the Bapaume area one of our machines, dropping to an altitude of 300 ft., successfully bombed a train from which German reinforcements were alighting."

British Headquarters, July 7th, 8.44 p.m.

"An officer prisoner states that his battalion came under strong machine-gun fire from one of our aeroplanes at an altitude of 300 ft. when marching to the battlefield, and that shortly afterwards the same battalion was shelled heavily by our long-range guns."

General Headquarters, July 8th, 11.12 p.m.

"Despite the cloudy weather, our aeroplanes and kite balloons did some useful work taking photographs and directing the fire of our batteries. A large explosion was caused in one of the enemy's ammunition depôts, and bombs were dropped on his billets."

"One of our machines, although disabled, sustained a running fight for twenty minutes with three hostile aeroplanes, and afterwards landed safely in our own aerodrome."

"With this exception few enemy machines were seen, and these were far behind his own trenches."

General Headquarters, July 8th, 12.20 p.m.

"Despite the unfavourable weather, our aeroplanes rendered valuable service. In addition to active co-operation with the artillery and important reconnaissance work, they bombed the hostile aerodrome at Douai, completely wrecking a hangar and doing other material damage."

General Headquarters, July 10th.

"Yesterday the Royal Flying Corps carried out several successful bombing attacks against various detrainment centres, ammunition depôts and aerodromes."

"Numerous combats took place in the air, as the result of which one German machine was destroyed and several others were driven to the ground in a damaged condition."

French.

Paris, June 4th. Afternoon.

"North of Frise yesterday one of our aeroplanes set another German captive balloon on fire."

Paris, July 4th. Evening.

"Our airmen last night bombed Longuyon Station, camps at Challerange (Eastern Champagne) and Savigny, and military depôts at Laon (south-east of Péronne)."

Paris, July 6th. Evening.

"During the night of July 5th-6th a group of our bombardment aeroplanes dropped numerous shells on the railway line from Ham to Nesle. Fires broke out in the stations of Ham and Vayennes. The line was damaged in several places."

Paris, July 7th. Afternoon.

"Yesterday German aeroplanes dropped several bombs on the open town of Lure. Eleven persons were killed and three wounded. With the exception of one soldier wounded all the victims were women or children. Note has been taken of this attack in view of reprisals."

"Yesterday one of our air squadrons successfully dropped 40 bombs on the railway junction of Lam-les-Moines, west of Charleville. During the return flight our escorting machines made numerous attacks on German aeroplanes. Two German aeroplanes were brought down, one close to Mezières and one in the district of Leffincourt."

Paris, July 9th.

"In the communiqué of July 7th the German Staff gives statistics of the losses sustained by French aviators which are absolutely incorrect. During the month of June it is claimed that the Germans lost seven machines and the Allies thirty-seven. Now the number of French aeroplanes that have not returned is fourteen. During the same period eighteen German machines were brought down, and seven others seriously damaged."

Paris, July 10th.

"This morning an enemy aeroplane of the Aviatik type was found in our lines. The machine came down during the night of July 6th in the course of a raid. The body of one of the two occupants was found buried under the wreckage, and two bombs left in the machine were destroyed."

Paris, July 10th. Evening.

"In the region of the Somme our chasing aircraft yesterday attacked numerous German machines. Four of the latter were driven down in the enemy lines. During the night of the 9th one of our bombing squadrons dropped a large number of bombs on the railway stations of Ham and Polancourt."

Russian.

Petrograd, July 4th.

"Our air squadrons carried out a raid on the railway station of Baranovitchi."

Petrograd, July 5th.

"An enemy aeroplane which threw bombs on our ships was brought down by our aviators. The enemy pilot and mechanic were made prisoners. As the result of a second encounter between our aeroplanes and those of the enemy we brought down another German aeroplane, which fell on the coast. One of our aeroplanes was brought down, and we lost the pilot, Second Lieutenant Izvekoff, and the mechanic, Nazaof, died heroically."

Petrograd, July 6th.

"Yesterday hostile aeroplanes flew over Minsk and dropped thirty-one bombs, wounding three men, seven women, and two children."

Petrograd, July 10th. Afternoon.

"On both sides aircraft are making numerous flights along the whole front. In the region of the Shubinsky Canal, east of the confluence of the rivers Berezina and Niemen, our artillery brought down a German aeroplane, and we took prisoners the airman and mechanic."

"No less than 10 enemy airmen flew over Molodetchno, and dropped 40 bombs, and set fire to a haystack, which was destroyed."

Petrograd, July 10th. Evening.

"In the neighbourhood of the village of Ivanovka, north of Kashovka, two squadrons of enemy aeroplanes dropped about 70 bombs on our ambulances, wounding two sisters of mercy and a delegate of the Red Cross."

Italian.

Rome, July 4th.

"An Austrian aeroplane was brought down by our artillery fire on to the Asiago plateau, the occupants being taken prisoners."

Rome, July 8th.

"Our aircraft bombarded the enemy's positions and columns south of Calliano, in the Adige valley and in the Upper Assa valley, returning safely."

Rome, July 10th.

"Between the Adige and the Brenta the artillery as well as the air services were active."

"Enemy aircraft dropped bombs on Cittadella, and on some places in the lower Isonzo region. No harm was done. Above Gorizia one of our aviators brought down an enemy aeroplane after a short fight."

German.

Berlin, July 4th.

"Nine enemy airmen were shot down without our suffering any losses, 5 during air fights and 4 by anti-aircraft fire. Six of these machines are in our hands."

Berlin, July 6th.

"To the south-west of Cambrai an enemy aviator this morning attacked a stationary hospital train from a low altitude by dropping bombs on it. Six wounded were killed."

Berlin, July 7th.

"South-west of Valenciennes we captured a French aeroplane. Near Péronne and south-west of Vouziers in the course of air fights enemy aeroplanes were compelled to land."

"German air losses in June: In air battles, 2 aeroplanes; shot down from the earth, 1; missing, 4; total 7."

"The French and English lost: In air battles, 23; shot down from the earth, 10; involuntary landings within our lines, 3; landings with the purpose of dropping spies, 1; total, 37 aeroplanes, 22 of which are in our possession."

Berlin, July 8th.

"Lieutenant Mulzer shot down near Miraumont a British super-battle plane. His Majesty the Emperor has bestowed upon this flight officer the Order "Pour le Mérite" in recognition of his accomplishments. An enemy aeroplane was brought down by anti-aircraft fire south-east of Arras. Another, which after an aerial battle south-west of Arras came down on the other side of the enemy lines, was destroyed by artillery fire."

"Near Molodetchno bombs were freely dropped on troops who were awaiting transport. On July 7th a Russian aeroplane, east of Borovno (on the Stokhod), was shot down in aerial battle."

Berlin, July 10th.

"Aerial activity on both sides was very lively. Our aviators

shot down five enemy aeroplanes—one near Nieuport, two near Cambrai, two near Bapaume—and two captive balloons, one on the Somme and the other on the Meuse. Senior-Lieutenants Walz and Gerliet have put out of action their fourth, Lieutenant Leffer his fifth, Lieutenant Parschau his eighth opponent. The Emperor has bestowed upon the last-named the Order of Merit.

"German aeroplanes successfully attacked enemy dug-outs east of the Stokked."

Austrian.

Vienna, July 9th.

"North-west of Dubno our airmen dropped bombs on a group of farms occupied by the Staff of a Russian Army Corps. The enemy immediately hoisted the Geneva flag on the threatened houses."

Turkish.

Constantinople, July 8th.

"A French aeroplane mother-ship appeared before Haifa. Two

seaplanes went up, one of which fell into the sea. The pilot and observer were rescued by the other seaplane. We brought the fallen seaplane, which was undamaged, to the coast, and found in it bombs, a machine-gun and munitions."

Constantinople, July 9th.

"Last Friday a British aeroplane parent ship and a French torpedo-boat arrived off Beirut. An aeroplane ascended from the ship and dropped bombs in the vicinity of the port, wounding three civilians."

Bulgarian.

Sofia, July 4th.

"An enemy aeroplane appeared for a short time over Sofia at 8 o'clock yesterday morning, and dropped eight bombs on various parts of the town without doing any damage. As soon as it was fired at by anti-aircraft guns it fled."

From Other Sources.

Some idea of the part played by the Royal Flying Corps in the great advance is furnished in the accompanying *résumé* from Reuter's special correspondent at the British Headquarters:—

"When the history of the Battle of the Somme comes to be written in its true perspective, I think it will be found that one of the most brilliant facets in this whole lustrous chapter of our military story is the share which our airmen bore in the fighting, and the influence they exercised upon the course of it.

"There is no need to wait upon history, however, to pay a fitting tribute to the Royal Flying Corps. Never at any time has the mastery of the air been so completely in the hands of our men as it is to-day. What was achieved by British aviators on July 1st and in the subsequent fighting has been no mere spontaneous result, but rather the culmination of weeks of arduous devotion and gallantry. How far this is true may be best illustrated by the circumstance that not a single German aeroplane crossed our lines during the opening attack between Gommecourt and the Somme, nor is it at all clear that any enemy kite balloons were in the air during that eventful morning, although I counted eight of our own from the Albert Ridge, where I viewed the bombardment.

"The truth is that the destruction of nine German 'sausages'—six in one coup—within the past few weeks has had a demoralising effect upon the Boche airmen. Prisoners admit this and go further, stating that their gunners are considerably handicapped by the mischief we have wrought with their aerial reconnaissance, and that so venturesome have our 'plane squadrons' become that their men in the trenches often get the 'jumps' at night and blaze away with machine-guns at machines which are 'asleep' in their aerodromes miles away.

"It is unquestionably due to the magnificent work of our airmen, which so largely neutralised the enterprise of the enemy aviators, that the Germans remained in doubt, until the attack actually came, as to where the present offensive would really develop. By sheer daring and perseverance our fliers rendered it so difficult for the hostile machines to get a view of the ground behind our lines that they were unable to get any correct intelligence of our concentrations and gun positions. They were literally harassed night and day. It was British aeroplanes that brought down the enemy kite-balloons, swooping to within 150 ft. of them with a cool disregard for the showers of 'Archies' which they drew around them, and then banking clear of the exploding hulk when the missiles had found their mark.

"Small wonder that the German observers hesitate to court a similar fate at the hands of such intrepid foes. And here I may say that the risks which our Flying Corps have had to face throughout the present offensive have been greatly accentuated by the bad weather conditions, necessitating flying at very low altitudes well within machine-gun range from the ground.

"*A propos*, I see that the German wireless issued last night claims that only seven Boche machines have been brought down during the month of June. I put the question as to how far this tallied with our information to one well-qualified to give an accurate answer. After referring to certain records, he totalled the number at twenty-one (most of them certain crashes, and all of them he described as 'sitters') to the credit of the British airmen alone, without reference to what the French—who are bracketed in the modest German claim—have accounted for.

"So completely have the Royal Flying Corps now established domination of the air over the length of the front that our machines virtually are never molested now during their reconnaissance flights save by anti-aircraft guns. The one-time redoubtable Fokker nowadays keeps well within her own boundaries, and in the last recorded fight with this type, when a squadron of British aircraft were bombing an important station to keep the Germans occupied in these parts while our offensive was beginning southward, no less than twenty of them came buzzing around our machines, and the only result was that two of them bit the dust violently, while all ours

returned. This fine incident may well stand as typical of the dominance which the British have attained.

"But let it not be supposed that the aviator has nothing more to do than jump into his seat, take-off, and scurry away in quest of fresh glory, in order to maintain his reputation. There is no branch of the British Army which works harder. For the past week the mechanics of the Royal Flying Corps have been kept busy every livelong night, not because the aeroplanes have received any abnormal degree of damage, but in order to keep things at the concert pitch of proficiency. As a result I honestly believe that our air squadrons are actually stronger to-day than they were before the beginning of the offensive, which is tantamount to saying that they are stronger than ever they were before.

"Not only are the airmen the 'eyes' of the gunners, but of late they have co-operated with the infantry so successfully and to such a degree that the co-ordination between the two is rapidly developing into a regular thing. Indeed, it has become quite a matter of course with more than one battalion to look out for its own particular aeroplane. But if the aircraft can be invaluable to infantry—as manifestly it can—it can also prove a deadly visitor. A day or two ago, as a battalion of the Prussian Guards were marching up to reinforce the hard-pressed enemy, one of our 'planes dropped to within 300 ft., and the observer, depressing his gun, emptied several drums of ammunition into the close ranks, enfilading the whole length of the column with telling effect before the crescendo of rifle fire caused him to sheer off. An officer of this same regiment who was subsequently captured said that the combination of this fierce fusillade and the barrage from our guns behind inflicted at loss of at least 50 per cent. of the strength of the battalion before it reached the shelter of its destination.

"The growing practice of employing aeroplanes in squadrons instead of singly has caused the adoption of a system of tactical evolutions not dissimilar to those followed in the Royal Navy. For example, in cruising, the machines are spread out in 'V' formation. For bombing purposes they form into line-ahead, and as the British machines have dropped more than 20 tons of explosives upon sundry selected spots of the German positions of late, it stands that they are getting pretty proficient in the line-ahead manoeuvre."

The *Morning Post* correspondent, writing on July 8th, says:—

"I have in various recent despatches commented on the comparative inactivity of the air service of the enemy in contrast with the extraordinary energy and valour of our own flying-men. The Germans are seeking to cover up their deficiencies in the air by circulating officially deliberate inventions intended to minimise their own losses and grossly exaggerate ours. They claim that throughout the entire month of June they lost only seven machines at the hands of the French and ourselves. I do not know what the record of the French airmen may be, but it has been very satisfactory. So far as we are concerned, we claim to have brought down 21 German machines during last month. Our airmen are most careful in their observations, and it may be accepted without question that this figure 21 represents the number of 'sitters' or machines that we know have been brought to earth. One of the remarkable feats in yesterday's operations was accomplished by a British aviator, who swooped down close to the Prussian Guards when they were in sore straits and peppered them with his machine-gun.

"It is now known that on the first day of our 'push' thirty-five combats took place in the air, that five hostile machines were brought down on the enemy's side of the line, and that at least five others, of which two were seen to be damaged, were driven down. One of our officers attacked no fewer than four of these machines single-handed, broke up their formation, and scattered them in all directions. The first machine he tackled was hit between the pilot and the observer, and returned to its aerodrome. The second was hit and managed to land in its own lines under control. When attacking the third, the officer was wounded in the leg, but gallantly continued firing until he got within ten yards of his enemy. He then

saw that the hostile observer was firing wildly into the air, and evidently had been wounded. Despite his own wound, the British officer chased yet another hostile machine and fired his remaining drum at it, but had to break off the fight for lack of ammunition. On the day following there were eleven combats in the air, and four enemy machines were brought to earth. On Monday last eleven air fights resulted in the shooting down of a Fokker, which crashed to the ground, and two biplanes were destroyed. These incidents in the air are exclusive of successful attacks on German kite balloons and the dropping of bombs on railway stations in the possession of the enemy. In addition, our airmen have developed an extraordinary aptitude in obtaining photographs and bringing back valuable information on the subject of enemy positions."

The *Times* correspondent, writing on July 9th, says:—

"In the unusually clear air, one of the most beautiful sights which I have ever seen was a fleet of 22 of our battleplanes manoeuvring over the enemy's lines, the squadrons circling, crossing, and interweaving at various altitudes. What their mission was I do not know, but besides the great beauty of the spectacle in itself, it would be difficult to conceive anything which could give a more thrilling impression of our mastery, not only of the air, but of the enemy's air service."

Mr. G. Ward Price, writing to the *Times* from Salonica, on July 3rd, says:—

"Another brilliant air raid was made this morning by a French aeroplane, which bombed Sofia for the second time since the Allies came to Macedonia. The pilot was a Frenchman who is perhaps better known at Hendon than even in his own country. He started at 4.30 a.m., and did the return flight of over 300 miles in 5 hrs. 25 mins. It took 2½ hrs. to reach Sofia from Salonica, and from a height of only just over 6,000 ft. 10 bombs were dropped on military establishments in the Bulgarian capital. It was evident that great alarm was caused by the reports of the bombs, for the two airmen could see a whole line of trams stop dead. Anti-aircraft batteries in the town shelled the raiding aeroplane without hitting it, and on the return journey the batteries on the hills north of Demir Hissar had evidently been warned to look out for it, for a violent fire was opened as soon as the Frenchman got within range. No harm was done."

A semi-official statement issued in Paris on July 4th says:—

"Finally, the part played in the battle by the French and British air services is considerable. Since July 1st no enemy airmen has been able to fly over our lines, and as aircraft of to-day are the eyes of artillery, it can be said that we have blinded the enemy, thus clearly disabling him for purposes of riposte."

"According to the reports of our airmen, there appear to be only two or three more successive systems of defence to force, before battle in open country becomes possible."

Mr. W. Beech Thomas, in his despatch to the *Daily Mail*, dated July 4th, says:—

"But things are quiet on the whole. The enemy is suffering from several things. The muddle of the retreat is one. Another is the want of targets, since his aeroplanes have been driven back and his kite balloons destroyed from the air. He is for the moment blind and not a little out of breath."

AIRCRAFT IN THE NAVAL BATTLE.

IN the despatches from Sir John Jellicoe regarding the Battle of Jutland, fought on May 31st and June 1st, there are the following references to aircraft work and the part played by the seaplane ship.

In Sir David Beatty's report of the preliminary stages he says:—

"From a report from 'Galatea' at 2.25 p.m. it was evident that the enemy force was considerable, and not merely an isolated unit of light cruisers, so at 2.45 p.m. I ordered 'Engadine' (Lieutenant-Commander C. G. Robinson) to send up a seaplane and scout to N.N.E. This order was carried out very quickly, and by 3.8 p.m. a seaplane, with Flight-Lieutenant F. J. Rutland, R.N., as pilot, and Assistant Paymaster G. S. Trewin, R.N., as observer, was well under way; her first reports of the enemy were received in 'Engadine' about 3.30 p.m. Owing to clouds it was necessary to fly very low, and in order to identify four enemy light cruisers the seaplane had to fly at a height of 900 ft. within 3,000 yards of them, the light cruisers opening fire on her with every gun that would bear. This in no way interfered with the clarity of their reports, and both Flight-Lieutenant Rutland and Assistant Paymaster Trewin are to be congratulated on their achievement, which indicates that seaplanes under such circumstances are of distinct value."

"At 5.5 p.m. 'Onslow' (Lieutenant-Commander John C. Tovey) and 'Moresby' (Lieutenant-Commander Roger V. Alison), who had been detached to assist 'Engadine' with the seaplane, rejoined the battle-cruiser squadrons and took station on the starboard (engaged) bow of 'Lion' (Captain Alfred E. M. Chatfield, C.V.O.).

"He (the enemy) was gradually hauling to the eastward, receiving severe punishment at the head of his line, and probably

The *Times* special correspondent at the British Headquarters, writing on July 6th, says:—

"One must again recur to the extraordinary superiority of our Air Service over that of the enemy. There is not a man in the British Army who has not an almost unlimited admiration for our airmen, and throughout the operations they have been a delight to watch. Their value in observation has been immense. As minor instances, it may be told that in one case an airman signalled the whereabouts of a convoy of nine enemy lorries on a road quite invisible except from the air. One of our heavy batteries opened fire on it and destroyed three of the lorries, and the rest escaped by bolting."

"Another airman a day or two ago was flying near Flers, four miles or so in German territory beyond our line at Contalmaison, when he saw infantry marching on a road, came down and played a machine-gun on them, getting home unscathed. The story of the airmen on this front during the last two weeks would furnish Mr. Kipling with material even more full of romance and reckless daring than the story of the submarines."

The *Times* correspondent at Amsterdam, in a message on July 6th, says that a captive balloon floats above Ostend.

The *Daily Mail* correspondent at Amsterdam, writing on July 5th, says:—

"The Germans appear to be transferring a huge air force to the west. Six or seven Zeppelins went west through Belgium on Monday, and since then aeroplanes have been moved both by rail and by flight."

According to the *Politiken*, a very large Zeppelin passed over the Skagerrak on July 5th. Observers were enabled to have a good view of the airship, which, when she had arrived over the extreme end of Skaw, returned and proceeded in a southerly direction. From Christianssand, Norway, it is reported that during the previous few days Zeppelins have been sighted off Christianssand and off Lillesand, making reconnoitring trips.

Mr. G. Ward Price, writing from Salonica on July 8th, says:—

"The daily activity of the artillery on the frontier was diversified to-day by an attempted German aeroplane attack on the French positions south of Doiran. One of the enemy machines which came under the fire of the French anti-aircraft batteries was brought down, and fell in flames near the lake."

Mr. Stanley Washburn, the *Times* special correspondent with the Russian Forces, writing from Lutsk on July 5th, says:—

"The Germans are increasingly dropping bombs from their aeroplanes upon all the important towns in the rear of our line, with a daily toll of civilian dead and wounded, but with practically no result in any other quarter."

The *Morning Post* correspondent at Salonica, writing on July 9th, says:—

"French aviators were again active to-day. They dropped several bombs on the military establishments at Monastir and also on Fort Rupel and the Bulgarian camps at Petritch. According to the local Greek journal, German aeroplanes yesterday dropped fifteen bombs at Sorovitch, killing some Greek soldiers and wounding other soldiers and civilians."

acting on information received from his light cruisers, which had sighted and were engaged with the Third Battle-Cruiser Squadron. Possibly Zeppelins were present also."

Dealing with the events on the morning of June 1st, Sir John Jellicoe says:—

"The enemy, however, made no sign, and I was reluctantly compelled to the conclusion that the High Sea Fleet had returned into port. Subsequent events proved this assumption to have been correct. Our position must have been known to the enemy, as at 4 a.m. the Fleet engaged a Zeppelin for about five minutes, during which time she had ample opportunity to note and subsequently report the position and course of the British Fleet."

"A cruiser squadron was detached to search for 'Warrior', which vessel had been abandoned whilst in tow of 'Engadine' on her way to the base owing to bad weather setting in and the vessel becoming unseaworthy, but no trace of her was discovered, and a further subsequent search by a light cruiser squadron having failed to locate her, it is evident that she foundered."

"Sir David Beatty reports in regard to the 'Engadine' as follows:—

"The work of 'Engadine' appears to have been most praiseworthy throughout, and of great value. Lieutenant-Commander C. G. Robinson deserves great credit for the skilful and seamanlike manner in which he handled his ship. He actually towed 'Warrior' for 75 miles between 8.40 p.m., May 31st, and 7.15 a.m., June 1st, and was instrumental in saving the lives of her ship's company."

"I fully endorse his remarks."

IMMELMANN'S LAST FIGHT.

THE following account of the aerial combat, which resulted in the shooting down of Lieut. Immelmann, has been written by the *Times* correspondent at the British Headquarters:—

"Before he left for England I had a talk with the pilot of the machine which vanquished Immelmann, and also with the observer, the man who did the actual shooting. It is one of the absurd chances of war that the great Immelmann (I think we can afford to call him that) should have been brought down by a man who had never been in an aeroplane before last February.

"The pilot (who must be called, as he was called in the official notice, merely 'Lieut. McC.') was, when I saw him, in hospital, and he is now in hospital in England. His injury, however, was not received in the historic fight, but in another encounter a week later, when he succeeded in getting, with the same observer, his second victim. The bullet, one of the latest armour-piercing bullets from the machine-gun in the German aeroplane, had entered 'McC.'s' shoulder, passing down through the muscles of his arm, and remained lodged in the forearm. It was by his bedside as he lay. His comrades of the Flying Corps rejoice, of course, that he should have put an end to the career of the famous enemy airman; but, from the professional point of view, it was a much finer feat when, with his right arm ripped as it was, in spite of pain and dizziness and loss of blood, with petrol tank shot through, he brought his machine and the observer safely and beautifully to earth in its home aerodrome.

"These amazing fellows are so confident of their superiority in the air to-day that they know that it might have fallen to any one of them to bring down Immelmann. But to do what 'McC.' did in the later encounter when he got his machine so cleanly to earth and then collapsed as it landed—that was a performance of which any man could be proud.

"He looked, as he is, very young; all the younger, perhaps, because 'McC.' is extremely fair and was additionally pale after his injury and some three days in hospital. He seemed to think that having got his enemy in that particular fight was rather a matter of course, and it was just an extraordinary piece of luck that enemy was Immelmann.

"He went up on the fateful morning for his usual daily patrol in his battleplane with his usual observer, whom, following also the official announcement, we must merely speak of as 'Non-Commissioned Officer W.' They saw Lieutenant Savage patrolling his adjoining beat, and also they saw far overhead three Fokkers. By this time 'McC.' was some 8,000 ft. up. The Fokkers, after their custom, had been waiting behind their lines at some 13,000 ft. Just as 'McC.' saw them one of the three dived and went down to earth; while the other two dropped straight for Lieutenant Savage. 'McC.' and 'W.' both supposed that the third machine was only going down to get below and join in the fight from another angle. But 'McC.'s' business was to go for what he saw; and that was

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Overseas Delegates at Farnborough.

THE Delegates from the Oversea Dominion Parliaments, who are now paying a visit of war inspection to the country as the guests of the Empire Parliamentary Association, were at Farnborough on Saturday. They witnessed several flights by R.F.C. officers, and subsequently were conducted round the Royal Aircraft Factory by Col. Mervyn O'Gorman, C.B.

The War Inventions Board.

It is announced that Vice-Admiral Sir Richard H. Peirse, K.C.B., M.V.O., has been appointed Naval Member of the Central Committee of the Board of Invention and Research.

R.F.C. Wireless Workers at Play.

AT the A.A.A. military sports at Stamford Bridge on Saturday the R.F.C. Wireless Section team finished second to the Army Service Corps (M.T.) Grove Park team in the one mile relay race. The winning team was the Australian sprinter, C. J. Mears, the world's champion, Private W. R. Applegarth, P. Hodge, and S. Wood, while the R.F.C. team was P. E. Mann, F. Gaby, Saul, and the old Army champion, Sergeant F. Mawby.

The Edward Busk Studentship.

APPLICATIONS will shortly be invited for the above Aeronautical Research Studentship. The remuneration will be at a rate not exceeding £150 per annum for a period of one year, with an extension in special circumstances to two years. Further particulars can be had from the Aeronautical Society, 11, Adam Street, Adelphi, W.C.

A Thank Offering.

A PLAQUE was unveiled at St. Mary's Church, Ramsgate, on Sunday, as a memorial of "the church's preservation on the night of the first Zeppelin raid, when bombs from hostile aircraft fell close to the building."

Mr. Pemberton Billing Joins Up.

ON Friday of last week Mr. Pemberton Billing, M.P., in response to an official notice, attended at Stratford, and was duly

the two Fokkers, which were dropping, like hawks after their prey, on his comrade's machine.

"Lieutenant Savage also dived to avoid the first rush of the two attackers, so that the actual fight took place at about 5,500 ft.: and down at one sheer drop for 2,500 ft. went 'McC.' to join in. It is a dizzying thing even to think of, the two birds of prey plunging through the almost illimitable space on the quarry below, and 'McC.' sweeping after them to his comrade's help. As he drew near he saw that he was already too late to bring help; only retribution remained. As he dropped, he saw Lieut. Savage's machine get out of control and then go plumb down to earth. Evidently the pilot himself had been shot from the foremost of the two Fokkers which had dived straight down for the tail of the British machine. 'McC.' followed no less straight. Before Immelmann had begun to steady himself from his victorious plunge 'McC.' was on him. He took no chance of firing from a safe distance, but went straight in, confident in his observer's nerve, and it was not until he was almost touching the other machine that 'W.' fired. At the very first round the enemy was hit. The machine seemed suddenly to bank, turned clean over on its right side, and then went down like a stone.

"Meanwhile the second Fokker had swung round, and in its turn was coming for 'McC.' The latter swerved, and circled to get inside the enemy; but no shot was exchanged. 'McC.' did not know who was in the machine which had fallen. Doubtless the occupant of the other Fokker did; and, knowing that Immelmann was gone, either had not the heart or the nerve to continue the fight, so he dropped down after his lost comrade.

"It was all a very gallant and very thrilling affair. In the fight of the following week, when 'McC.' again with 'W.' was one of five British battleplanes which met five Fokkers and brought down two of them, while all our machines came safely back, except for 'McC.'s' injury to his arm, the thing was on an even more heroic scale. But it has not the glamour of the fight which was Immelmann's last.

"At the squadron aerodrome, not far from where 'McC.' was in hospital, I saw the battle-scarred machine in which he made his flights. It is not the veteran of the squadron; for that is another of the same type which has over 200 patches on its planes where enemy bullets have gone through. 'McC.'s' machine, however, is bad enough; and, besides all the peppering of the planes, you can see plainly the hole where the bullet went through which caught him in the shoulder, while there are other holes in the body of the machine which narrowly missed being even more serious.

"When I was there two large wreaths of flowers lay on the ground stitched up in canvas. One was for Lieut. Savage and the other for Immelmann. That night it was the intention that they should be dropped by aeroplane into the enemy's aerodrome."

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enrolled for "garrison duty at home." He received the customary 2s. 7d., but as he was given indefinite leave we venture to think—and hope—that this will be the close of this incident in the M.P.'s life.

Fatal Accidents.

WHILE flying on the East Coast of Scotland about 9 p.m. on July 5th, an aeroplane fell in a field in a lonely district. The pilot, named Hamel, was instantly killed, and the passenger, named Berry, severely injured.

Flight Lieut. Wallis was also killed in the east of Scotland. It is stated that he was flying comparatively low across a railway when a train dashed by. The aeroplane dived to the ground, and the pilot was instantly killed.

A double fatality occurred near Whitstable on July 8th. After circling over the town, the machine in coming down suddenly nose-dived and fell to the ground. The pilot was killed, while the passenger died on the way to the hospital.

Gallant Rescues by Pilots.

TIMELY aid by Messrs. Sidney C. Lambert and Eric G. Adams, two pilots, led to the rescue of two girls, who were thrown out of a canoe which capsized on the Thames near Reading. The pilots dived in in full uniform. Unfortunately a third girl was drowned.

"Airy Fairy Lillian," or the Pull of the Plane.

AMONG other items discovered in the room of Lillian Hargreaves—with an alias—charged at Blackpool with stealing £134 from her employer, a boarding-house keeper, were receipts for three trips in aeroplanes at two guineas a time.

Zeppelins and Dutch Ships.

ACCORDING to the *Handelsblad*, the Dutch schooner "Weldaad," of Groningen, which arrived at Ymuiden from Karlskrona on Sunday, reports that she was attacked by a Zeppelin six miles off the Horn Reefs. The bomb which was dropped exploded in the sea.



The opening of the Whitehead Aircraft Co.'s new works by Sir Charles Wakefield. On the Lord Mayor's left, seated, is Mr. J. A. Whitehead, the founder of the Company.

FURTHER EXTENSION OF THE WHITEHEAD AIRCRAFT WORKS.

THE original small factory at Richmond with which Mr. J. A. Whitehead entered the ranks of aircraft manufacturers, about twelve months back, having proved itself completely inadequate for the remarkable business which has grown up so rapidly under his exceptional organisation, it was found necessary to supplement this by new premises for the Whitehead Aircraft Co., Ltd. On Monday last this important extension, which has been erected in record time, was inaugurated by the Lord Mayor of London, Sir Charles Wakefield.

It was a most successful ceremony, a large number of distinguished guests being present in addition to some 600 workers. The Lord Mayor, who was received by the Mayor of Richmond, was presented with a beautifully made silver model biplane. Mr. J. Ward, the popular and capable works' manager, was also presented with a souvenir in the form of a gold watch subscribed for by the workers of the factory. Hanging up inside the building opposite the entrance was a banner bearing the firm's motto:—"There is no fun like work." Altogether a very happy gathering, from which the Whitehead employees are likely to get inspiration for efforts to further push along the undertaking with which each and every one is proud to be associated.

H. M. HOBSON, LTD., AND THE WAR.

THE war has wrought many changes in our commercial life, and in none so much as in the aviation industry. Firms whose business before the war was quite unconnected with aviation are now engaged in one way or another with the construction of aircraft, whilst those firms already in the industry, having previously only just managed to keep going, found themselves "full up to overflowing" with work, necessitating extensive additions to their factories or plants. Such was the case, for instance, with the House of Hobson. Prior to, and in the early stages of the war, business with the famous Claudel-Hobson carburettors and Hobson sparking plugs for aero engines was brisk, but by no means beyond the scope of existing resources of production and supply. Eventually, however, an ever-growing demand for these articles, as well as for a special type of carburettor for the Government, soon brought about the position of being unable to keep pace with the requirements of the day. Hence the remarkable metamorphosis at 29, Vauxhall Bridge Road, which, originally a garage and repair works, is now a fully-fledged factory with up-to-date machine shops.

"Here," said Mr. Crump, as he showed us round, "is where we used to wash the cars," but it did not look like it, for machinery now fills up every inch of available space. So also was the state of affairs in the shops where cars once used to be overhauled and

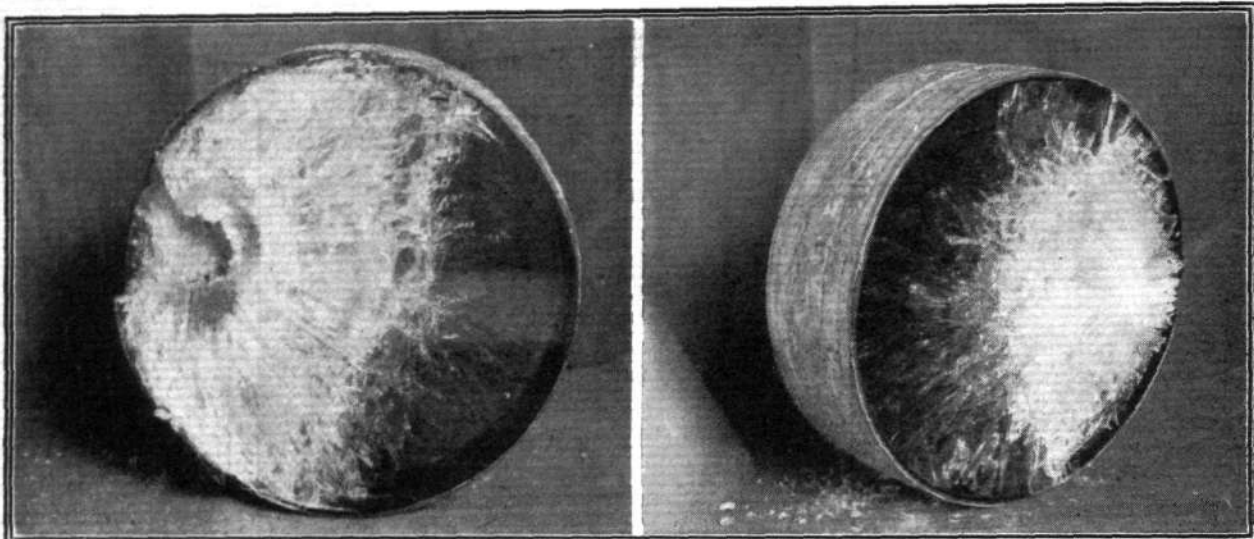
repaired, whilst upstairs machinery and benches were to be found everywhere—and yet, unless you had seen these self-same premises in the early days, it would be impossible to tell they were not originally equipped for the business in hand. Such is organisation and adaptability. The work done "down Vauxhall way," by the way, is only supplementary to that carried out at the large Hobson factory at Birmingham—but even this does not satisfy the directors, for we understand that yet another establishment is to be in full swing before long.

UNAFFILIATED MODEL CLUBS DIARY AND REPORTS.

Club reports of chief work done are published monthly. Secretaries' reports, to be included, must reach the Editor on the last Monday in each month.

Finsbury Park & District (30, RONALDS ROAD, HIGHBURY, N.).

Monthly Report.—During June much good work has been carried out, especially with regard to the construction and flying of model waterplanes. On June 3rd the club met at Highgate Ponds, where waterplanes were flown with varying success by Messrs. A. Richards and F. E. Rayner. The latter, after a few minor adjustments of his floats, managed to make his machine rise off water, and perform short flights, but the former was less fortunate, owing to his machine requiring a few alterations, which could not be carried out on the spot. Mr. E. Coleman, who was flying a freak monoplane fitted with a land chassis, after many excellent flights, had the misfortune to fly over and finally land in the lake, where his machine sunk before it could be rescued; he received 3s. 6d. compensation from the club insurance for the lost machine. On June 10th the club again met at Highgate Ponds. This time four members had waterplanes, namely, Messrs. A. Richards, F. E. Rayner, H. Mullin, and E. Coleman. All four members put up some very good exhibitions of taxiing on the water and flying, but owing to a deluge of rain and hail which fell during the afternoon, it is feared that the members were as wet as their machines. On June 17th the club held a meeting on its home ground for the first time during the month, when much good flying was done by Messrs. A. Richards, F. E. Rayner, E. Coleman, and W. Hardinge. Mr. Eric Coleman was flying a new light-weight 3-ft. mono. of just over 3 ozs. This machine put up many splendid flights, and was lost from sight on two occasions; the latter time, unfortunately, it was not recovered. This is the second machine which this member has lost during the month; he again receives compensation under the club insurance scheme. Several good flights were put up by the secretary, Mr. F. E. Rayner's large monoplane, but no great durations were registered owing to the somewhat heavy wind. Mr. A. Richards was flying most consistently all the afternoon and evening, his machine being a 2ft. 6 in. light-weight monoplane of about 2½ ozs. Mr. W. Hardinge was also flying a machine of this type, but after several good flights this member had the misfortune to break his fuselage in a bad landing. On June 24th, the club members once more met at Parliament Hill (near Highgate Ponds), but this time with land machines. Several members were present, but owing to the bad weather only two with machines, namely, Mr. A. Richards and Mr. E. Coleman. The former, despite the very gusty winds which prevailed throughout the afternoon, made many fine flights with his small tractor monoplane, most notable of which was one in which the machine rose off ground under her own power, and flew about 300 yards in a wind of about 30 m.p.h. Mr. E. Coleman also gave a display of what could be done in the way of "wind fighting" on a strongly-built machine, and made many good flights during the afternoon.



A remarkable example of the wisdom of having Triplex glass fitted.—An 8-ply Triplex observation panel, from an armoured car, showing the effect of reversed German ammunition at 25 yds. On the left, front view, and on the right, a back view of the Triplex panel.

CORRESPONDENCE.

The Case of the Firm of "Mann and Grimmer."

[1926] Our vicissitudes for several years past are familiar both to your readers and yourself. For the last two years the firm of Mann and Grimmer has been financed by a prominent solicitor of Regent Street. Last year we succeeded in producing "M.1," a twin-propeller battleplane with a speed of 85 miles per hour and a climb of 500 ft. per minute. At the end of March in the present year, despairing of being able to secure any recognition from the Government, our financier withdrew his support. Left to our own resources, we were able to secure a Government contract for a new and improved machine, "M. 2A," designed for a speed of 100 miles per hour, together with a substantial subsidy. Although we had every legal right to execute this contract ourselves, on strictly sentimental grounds we re-approached our previous financier, made him a present of the contract and cheque, and accepted a re-engagement from him as designer and manager respectively on a weekly basis on the *verbal* understanding that should the machine turn out an established success we were to have a substantial share in the business.

Time went on, the new machine was three-fourths designed and constructed, when from no adequate cause at all our past financier attempted to spring an unprovoked quarrel upon us in which he suggested a possible dismissal. We immediately asked him to define our status in the firm, and his reply was instant dismissal. This was followed by the sale of the incomplete machine to "Blériot Aeronautics," the closing of the works, and the dismissal of the entire staff who have worked with us so long. Thus at a single stroke we have been deprived of the fruits of our five years of experiment which commenced in 1911 presumably in order that our one-time financier—a gentleman that we trusted too implicitly to ask for any formal agreement—might reap the greater profit!

With regard to the uncompleted machine now at Brooklands, we have the reluctant duty of disclaiming any responsibility for its safety and performance. No one regrets more than ourselves the scandal of the closing down of an aeroplane works in time of war, the cessation of our long—and we hope we may add valuable—experiments, and the rending apart of our staff, all members of which have been our friends and comrades. The War Office refuses either to intervene or to give us a second contract, but the question is being raised by our friends in both Houses and before the Judicial Committee. The action taken appears to be an attempt to take away our means of livelihood, to deprive the science of the results of our long years of assiduous and dangerous experiment, and to cast—tacitly—aspersions on our characters. We are both plain men, unversed in the devious ways of the law, but we consider that this drastic action of our one-time financier, however valid it may be legally, is not in accord with the principles either of equity or business morals. We wish at the same time to thank our many friends in the industry who have sent messages of sympathy during this last fortnight of trial.

R. F. MANN.

ROBERT P. GRIMMER.

(Late of Mann and Grimmer.)

Surbiton, July 7th, 1916.

[Taking the case as stated above, there would certainly appear

to be scope for an enquiry into the position which has been created. We can hardly conceive that the authorities will endorse without protest what would seem upon the face of it to be a very serious injustice.—ED.]

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IN the R.F.C. they agree that the feminine of airman is heiress.—*Whipped Topics.*

! ! !

(SCENE: T.B. at anchor. Calm evening.)

FIRST A.B.: "Listen, Bill; an aeroplane!"

SECOND A.B.: "That ain't a aeroplane. It's the Chief Engineer 'umming!"—*London Opinion.*

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PUBLICATION RECEIVED.

Dynamical Stability of Aeroplanes. Abstract of Thesis. By J. C. Hunsaker. Boston, Mass.: Massachusetts Institute of Technology.

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IMPORTS AND EXPORTS, 1915-1916.

AEROPLANES, airships, balloons, and parts thereof (not shown separately before 1910). For 1910 and 1911 figures, see "FLIGHT" for January 25th, 1912; for 1912 and 1913, see "FLIGHT" for January 17th, 1914; for 1914, see "FLIGHT" for January 15th, 1915; and for 1915, see "FLIGHT" for January 13th, 1916:—

| | Imports. | | Exports. | | Re-Exportation. | |
|--------------|----------|---------|----------|---------|-----------------|-------|
| | 1915. | 1916. | 1915. | 1916. | 1915. | 1916. |
| January ... | £ 20,382 | £ 1,509 | £ 435 | £ 6,399 | £ 13,706 | — |
| February ... | 380 | 6,444 | 138 | 30,693 | 18,823 | — |
| March ... | 280 | 3,388 | 7,218 | 17,872 | 5,090 | 7 |
| April ... | 2,189 | 3,383 | 23,986 | 22,608 | 275 | 3,783 |
| May ... | 178 | 1,986 | 12,530 | 26,165 | 8,250 | 300 |
| June ... | 5,469 | 4,986 | 3,730 | 50,287 | 2,400 | — |
| | 28,878 | 21,696 | 48,037 | 154,024 | 48,544 | 4,090 |

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NOTICE.—Owing to pressure upon our Advertisement columns, we have been compelled to hold over several advertisements.

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| 12 " " " " " " " " | 6 | 6 | 12 " " " " " " " " | 11 | 0 |

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